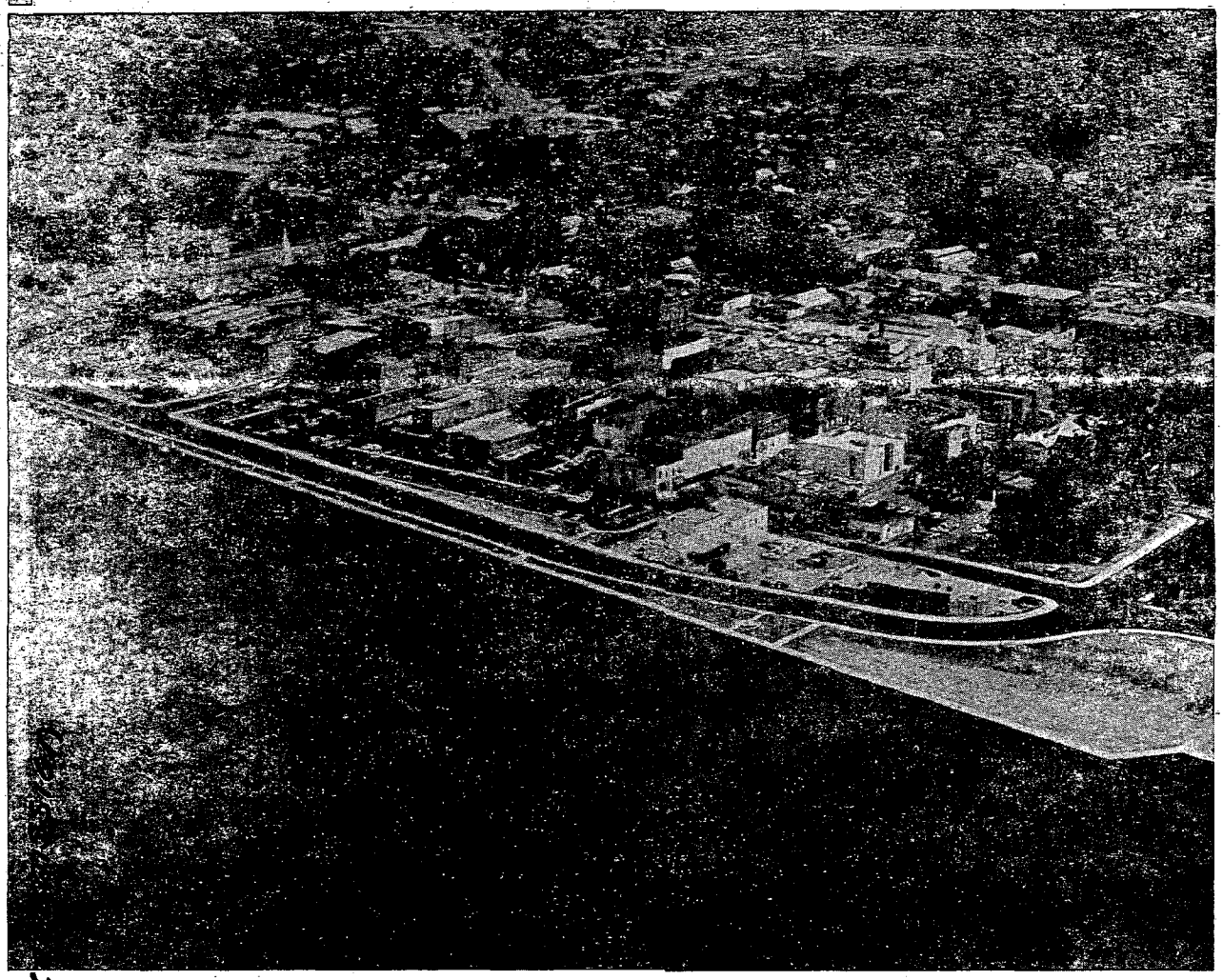
LAND DEVELOPMENT PLAN



CAMA
1976

shington, n.c.

WASHINGTON
LAND USE PLAN

AS

MANDATED BY

STATE GUIDELINES FOR LOCAL
PLANNING IN THE COASTAL AREA
UNDER THE COASTAL AREA
MANAGEMENT ACT OF 1974

MAY 21, 1976

WASHINGTON CAMA LAND USE PLAN

Washington, North Carolina

March 21, 1976

Prepared By

WASHINGTON PLANNING BOARD

James P. Blanton, Chairman
Blake C. Lewis, Jr., Vice Chairman
William Roach
Leon Randolph, Jr.
William Lurvey
Thomas E. Umphlett
Thomas M. Singleton, Jr.
Henry C. Humphreys
Judy Hayes
George C. Bailey

For

THE CITIZENS OF WASHINGTON

To Be Implemented By

WASHINGTON CITY COUNCIL

Richard Tripp, Mayor
Louis T. Randolph, Mayor Pro Tem
A. N. Sawyer
Carlotta Mordecai
Joe Hickman

PROJECT STAFF

George L. Nichols, Project Planner
Marian Alligood, Secretary
Debra Ingalls, Secretary
Patricia Sheppard, Secretary
Danny Smith, Draftsman

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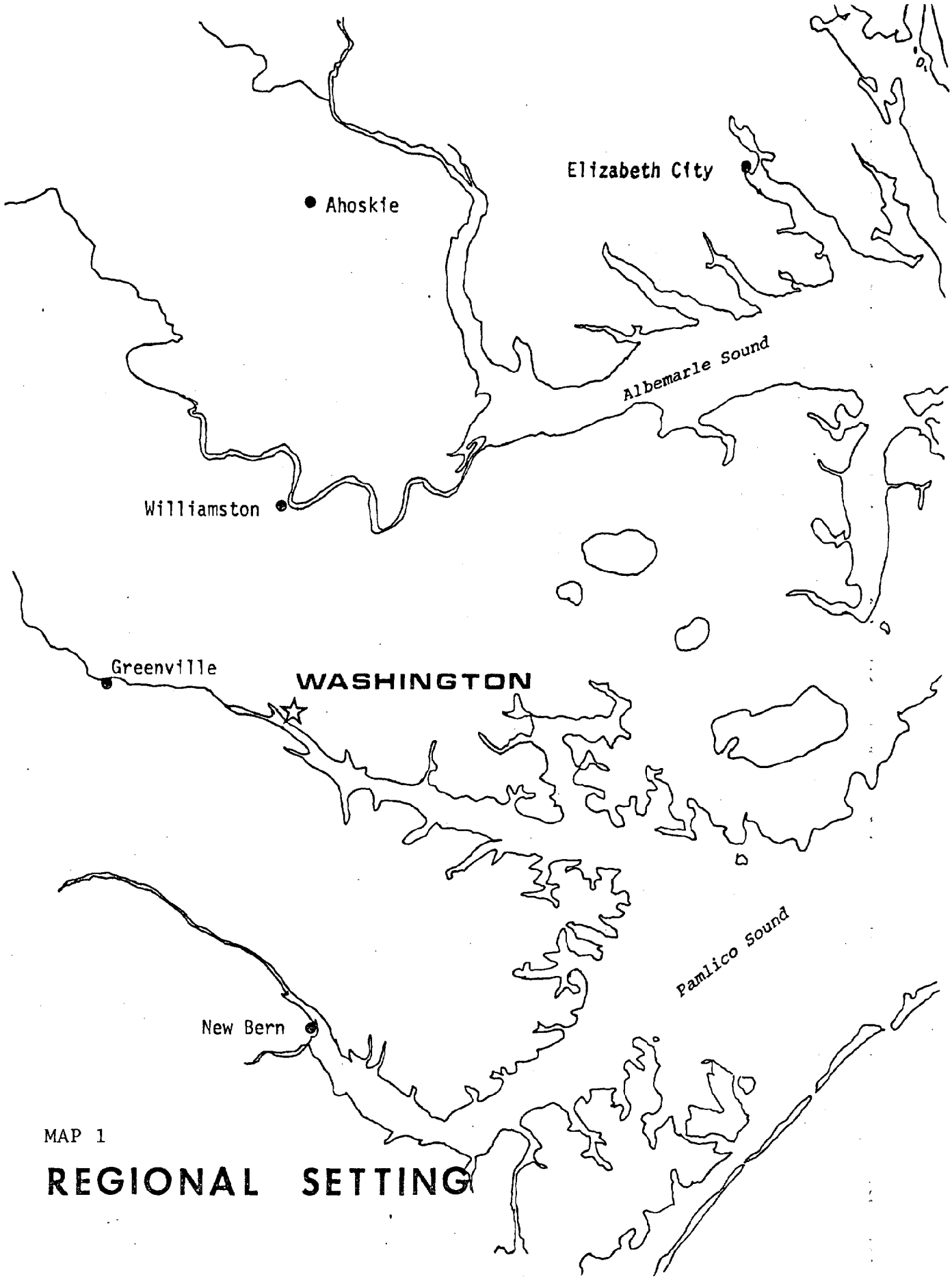


MAP 1

REGIONAL SETTING

PURPOSE OF PLAN

North Carolina's coastal area is considered one of the most important regions for food production, sport and commercial fishing, future expansion of commerce, industry and recreation. Pursuant to the orderly growth and protection of important natural resources of this area, the 1974 General Assembly passed the Coastal Area Management Act of 1974 (CAMA).

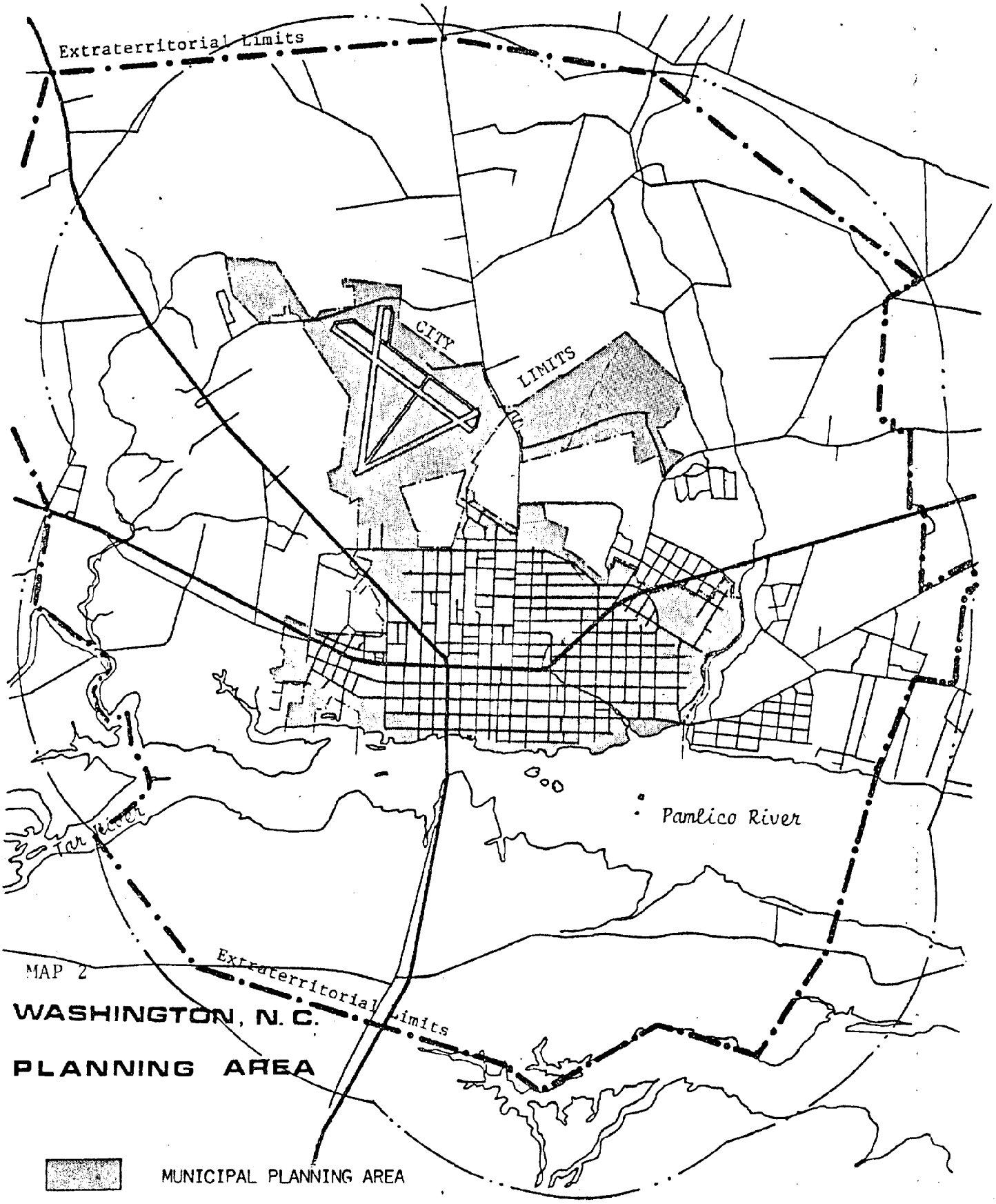
CAMA is a state law that requires all local governments in Coastal North Carolina counties and towns to develop a land use plan for their future growth. This land use plan will be considered the official guide for the future development of Washington and its extraterritorial jurisdiction. The plan allocates various land uses to specific areas so as to correct inadequacies in past land development patterns and to assure appropriately related future development.

Goals and objectives are also stated in this plan. To accomplish the goals and objectives of this plan, the adoption of implementation programs is a necessity. Legal tools such as zoning ordinances and subdivision regulations will adhere to the plan. In addition, capital improvement programs as well as short-and long-range financial plans should serve to carry out plan objectives.

Utilization of this plan will result in more cost effective use of public funds and a higher quality of life for Washingtonians.

GENERAL APPROACH

This plan assesses present land use patterns and problems within the Planning Area and sets forth recommendations for alleviating those problems. It analyzes possible future land development problems and needs, and recommends procedures for avoiding such problems. More importantly, this document



MAP 2

WASHINGTON, N.C.

PLANNING AREA

MUNICIPAL PLANNING AREA

EXTRATERRITORIAL PLANNING AREA

provides a policy guide for use by the Planning Board, the City Manager, and the City Council for making day-to-day decisions bearing on land development and services.

STUDY AREA, DEFINED

Reference will be made to the Study Area or the Washington Planning Area. This Study Area consists of the City of Washington and its extra-territorial zoning and planning jurisdiction which extends one and one-half (1½) miles in all directions. The Washington City Council has legal authority to guide future growth and development through the administration of zoning and subdivision regulations, as well as through extension of municipal services. Thus, this land use plan considers the land area contiguous to Washington, since most new development is project to occur there due to its undeveloped character. Map 2 depicts the Washington Planning Area.

AUTHORITY TO PLAN

North Carolina CODE, Part 1 of Article 19, provides the enabling legislation for the cities and towns within the state to create or designate one or more planning agencies. In part, Section 160A-361 of Article 19 states:

> "Any city may by ordinance create or designate one or more agencies to perform the following duties:
>
> (1) Make studies of the area within its jurisdiction and surrounding areas;
>
> (2) Determine objectives to be sought in the development of the study area;
>
> (3) Prepare and adopt plans for achieving these

objectives;

(4) Develop and recommend policies, ordinances, administrative procedures, and other means for carrying out plans in a coordinated and efficient manner;

(5) Advise the council concerning the use and amendment of means for carrying out plans;

(6) Exercise any functions in the administration and enforcement of various means for carrying out plans that the council may direct;

(7) Perform any other related duties that the council may direct..."

Article 19 further provides that the planning agency may prepare a zoning plan, including both text and maps, showing the various zoning districts. Pursuant to Section 160A-383 of that same article, those zoning regulations are to be made in accordance with a comprehensive plan and designed to lessen street congestion, to secure safety from fire, panic, and other dangers; to promote health and general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentrations of population; and to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements.

PLAN FORMAT[1/]

This land use plan is divided into ten major parts. PART I, the

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1/ As mandated by Subchapter 70 - "Generally Applicable Standards of Review for Land Use Plans and Synopsis."

Introduction, is designed to provide the reader with a brief plan coverage, and a general historic and geographic description of the Washington Planning Area. PART II is a description of present conditions in the area. It contains background data on the physical, urban and built-up characteristics of the environment. PART III consists of public participation activities. These activities are discussed in the context of citizen-identified major land use issues and problems. PART IV discusses land use development constraints. PART V addresses estimated population and economic demands. Future land needs and community facilities demands are included. PART VI is the land use plan description. It discusses the land classification system. Areas of environmental concern are addressed in PART VII. PART VIII is designed to summarize the content of the plan with statements of major conclusions. The final part, PART IX, defines the city-county plan relationship.

HISTORIC SETTING

"THE CITY AND THE RIVER"[2/]

On March 24, 1663, Charles II of England gave eight Englishmen a Proprietary Charter granting to them all territory lying between 31 and 36 degrees North latitude, extending westward to the South Seas (Pacific Ocean). Charles II gave them this enormous grant of land to repay them for helping to restore him to his throne after the civil wars following the fall of Charles I.

The land that is now Washington was granted by these Lord Proprietors on July 30, 1726, to Christopher Dudley. This grant contained the area from Jack's Creek to Union Alley, north to Fifteenth Street and to where Twelfth Street and Charlotte Street would intersect if Charlotte Street were extended.

[2/] Unpublished project paper by Glenn Woolard (May 3, 1975), pp. 2-13.

On October 16, 1729, Thomas Bonner purchased this 337 acres of land. His son James eventually received all this land.

Washington was actually founded in the fall of 1775 when James Bonner held a lottery to dispose of lots in his proposed town. It is referred to here as a proposed town because it was not approved by either the General Assembly or the Provincial Congress due to the confusion of the approaching Revolutionary War. The town was first known as the "Town at the Forks of the Tar River." It consisted of 30 acres of Bonner's farm divided into 60 lots, six streets and an alley, the streets being Water, Main, Second, Third, Market, and Bonner. Union Alley marked the western boundary and was the axis around which future expansion occurred: Thomas Respess later laid out additional lots to the west of Union Alley which doubled the size of the town.

The first record of the town being named Washington did not appear until 1776. Therefore, the year 1776 is accepted as the year that Washington was founded. It was also the first town in the United States to be named Washington and is the basis of the town's present motto of "The Original Washington Since 1776."

The Pamlico River has played a major role in the town's development. Even before it became a town, the river enabled Washington to become a center of commerce. In 1758 James Bonner sold lot number one of his future town to Aquila Sugg, a merchant from Edgecombe County. The lot consisted of 105 feet of frontage on the river and back 210 feet from the river. Sugg purchased some more lots and erected a wharf, warehouse, and other buildings. From these facilities he shipped naval stores and other produce brought down the Tar River on flat-bottom barges. Vessels bringing goods upstream preferred to come to Sugg's wharf instead of Bath, because Washington was 20 miles further inland. The merchants of Bath probably encouraged Bonner to start his town

without the Assembly's approval. Thus, this advantageous location for water commerce and transportation was a key factor in the town's being established.

Before the Revolutionary War, Washington's early merchants established a profitable business by exporting naval stores to Great Britain. These exports gave Washington a thriving initial economy, because Great Britain badly needed naval stores to maintain its navy. When the First Continental Congress cut off trade with Great Britain, Washington's thriving economic base was lost temporarily. The merchants faced bankruptcy. Merchandise piled up on the wharves and in the warehouses. The growth of the infant town was threatened.

The merchants, however, adjusted to these new circumstances and the new town again flourished. Two major factors made this revitalization of the economy possible. First, the Continental Army's and the Militia's urgent need for food and supplies provided a new market for the plantations which used Washington as a port. Second, the shallow inlets and shifting channels of Pamlico Sound were no longer a handicap to shipping. Small vessels carrying supplies to and from New England and the non-British West Indies could slip through the inlets and escape from the larger British men-of-war. With a growing demand for sailing schooners and brigs, ship builders in Washington also prospered. As other ports were either captured or blockaded, Washington's importance increased.

After the Revolutionary War, Washington continued to grow and prosper as a port. In 1782, Thomas Respess began to sell the lots to the west of Union Alley. In less than six months, he had sold 35 of his 52 lots. This area was known as Respess Town. Respess sold the remainder of his land to John Gladden. Gladden developed this area to the north of Respess Town as Gladden Town. This expansion again doubled the size of the town.

In 1785, Washington became the county seat of Beaufort County and has remained the county seat throughout its history. The county seat was transferred from Bath to Washington, because Washington was becoming the commercial center for the county, and it could better accommodate the people participating in the courts. This gave the town's citizens more prestige and also resulted in more people traveling to Washington from various places in Beaufort County.

With a sound economic base, the town's physical boundaries continued to expand. Hadrianus Van Norden laid out Van Norden Town on the land extending from Respess Town to present Washington Street and north to Sixth Street. James Bonner added land from his farm as far north as Sixth Street. This was called Bonner's New Part as distinguished from the original town (60 lots) known as Bonner's Old Part. Land east of Bonner Street known as Pungo Town was later opened for development.

Although the town was thriving, it faced two major crises in the mid 1800's --the first in the loss of human lives and the second in the near destruction of the whole town. Mosquitoes carrying yellow fever were brought in on a vessel from the West Indies. The epidemic of yellow fever was the worst in Washington's history. The future and present labor force of the town paid its toll with as many as seven deaths in a single day.

The second crisis occurred during the Civil War when the Yankees burned half of the town including most of its churches. A second fire resulted when a "Washingtonian" family, upon hearing rumors that the Yankees were returning, piled their valuable papers outside and set fire to them so the Yankees could not get them. The fire went out of control and burned the second half of the town. Reed vividly describes the conditions of the town after the Civil War in the following quotation:

Those who had left the gay, prosperous, and thriving town of Washington, with a population of over 1,600, came home to a shell-riddled, burned-out skeleton of a town, peopled by few more than 500 hard-eyed, grim-visaged men and women, and a scattering of hollow-eyed, hungrey children. They also came home to grinding poverty and back-breaking labor that few, if any, in Beaufort County had dreamed of before the war.

Having survived these hardships and others, the town's growth and economy was again bolstered by its location on the Pamlico River. The town's growth in the remainder of the nineteenth century was typical of most cities of its size. Influenced by a changing technology and culture, paved streets, electric lights, a gas plant, telephone lines, better schools and more churches were gradually added to the town. By 1889, it had reached its peak as a port. More than one-half of the state's commerce was passing through the Washington port, and the city rated only second to Wilmington in shipping. The water-front was covered with numerous warehouses, wharves, industrial buildings and shipyards. The thriving commercial activity along the waterfront was the core of the town's economy.

At the turn of the century, this relation between the town and the river was drastically changed due to several technological factors. With the building of railroads and hard-surface overland roads, the advent of modern trucking lines and the industrial development taking place inside the United States, Washington's shipping industry began to decline. Washington gradually diminished in importance as a business and distribution center. An economic downturn followed.

During this period the waterfront was gradually becoming a blighted scar of the past in the central business district. The wharf was still in use about 40 years ago. There was some loading and unloading at nights. The noise

disturbed the patients in the Riverview Hospital and some of the doctors who were on the city board wanted to do away with the wharf. Several years later the wharf began to be done away with a little bit at the time. In 1950, one steamboat line was still carrying freight out of the nearly deserted port (waterfront area). By 1951, there were only a few barges, tug boats and sailboats coming up the Pamlico River to Washington. The former commercial waterfront was now only a harbor for old wharf rats as big as small puppies. The accumulation of rats along the deserted waterfront was a definite environmental problem. These rats spread into various portions of town especially in the lower income areas. Everyone burned wood except those in the high income class who burned coal. There were usually rats around the wood piles. At this time people not living on Main Street still raised chickens. They had to build coops raised up off the ground to keep the rats from killing their chickens and eating the eggs. The rats also accumulated around the poorer-kept open drainage ditches.

Little growth occurred in Washington until the end of World War II. At this time, the citizen leaders began to work for new economic development. A shirt factory was the first industry acquired, and the community was so excited that it constructed a plant for the industry. A truck body manufacturer and a garment manufacturer were home developed industries. A synthetic yarn plant was also acquired. This industrial development continued at a steady pace with an electrical appliance industry, a textile dyeing operation, and a filter-making industry coming to Washington. The most recent ones acquired are a boat manufacturer and a valve manufacturer.

Four public housing projects and four urban renewal projects have made the greatest change in Washington's landscape in the past decade. In 1961, the City Council recognized a need for these programs. The Council appointed a

Citizens Committee to investigate the possibility of establishing such programs in Washington. The Committee toured other cities to view existing programs and made inquiries throughout the state. After a positive recommendation from the Committee, the City Council appointed Boards of Commissioners for a Washington Housing Authority and for a Redevelopment Commission.

Of these projects, the Downtown-Waterfront Urban Renewal Project has resulted in a dramatic change of the waterfront in the central business district. The political process behind the plan being approved will be briefly outlined. The plan was first approved by the Commissioners of the Redevelopment Commission. A public hearing was held and there were no objections to the plan. The plan was then approved by the City Planning Commission and finally by the City Council.

From a list of eight objectives there were two over-riding objectives. One was to redevelop the waterfront so the city and commercial center would again relate to the river, and the river would enhance the setting of the city and the Central Business District. Another objective was to rehabilitate and revive the Central Business District as the commercial center of the city.

The project area consisted of 45 acres and 169 structures. Seventy-five percent of the buildings were found to have deficiencies. In addition, there were some very important environmental deficiencies: 1) Detrimental and incompatible land uses-- the old run down buildings along the waterfront formerly used in water commerce-related activities no longer had such a relation to the town or the river. There were unsightly and depressed land values in the Central Business District. 2) Obsolete building types-- some buildings, 50 years or older, had been adapted many times for changing needs but were not designed for their present uses. 3) Overcrowding --the waterfront had been developed in a time with few zoning and building codes, resulting in a

haphazard arrangement of structures. There was also poor vehicular circulation, inadequate open space for recreational uses, and inadequate storm drainage facilities.

In executing the project the entire Downtown waterfront area was cleared of abandoned warehouses, rotting pier pilings, deadend streets, and dilapidated buildings. A 1900-foot steel bulkhead was constructed and backfilled with sand pumped from the river. This created about five acres of land on which Stewart Parkway was constructed. On the strip of land between the bulkhead and the parkway are a line of Japanese Cherry trees and other shrubbery and several benches. This provides a park-like area for the public and also an attractive visual approach for people entering Washington on U.S. Highway 17. The bulkhead has free water and metered electricity to accommodate overnight docking. On the cleared land, 350 free offstreet parking spaces were built. Some of the cleared land was also sold for the Fass Brothers Restaurant and the Page office building.

During this same time period, a peripheral shopping center, Washington Square, was developed. Since 1963, the city had substantially increased its corporate limits to the north. Therefore, it was felt that the Central Business District could no longer effectively serve the entire planning area. Washington Square was opened in 1972. It was meant to relieve a little of the past saturation in the Central Business District; however, the shopping center's competition for the shoppers' dollar became a threat to the economic status of the Central Business District.

During late 1973, Main Street and Market Street were also renovated in an effort to create a semi-mall atmosphere in the downtown area. Sidewalks were widened, and some on-street parking was removed and replaced with planters and benches. Improved street lighting was installed. The once shoddy-looking

dark alleys leading from the streets to the parking lots were paved, lighted, and decorated.

The Downtown-Waterfront urban renewal project has successfully accented the natural scenic advantages of the Pamlico River and also created a semi-mall atmosphere. Some of the downtown merchants also took it upon themselves to renovate the fronts of their stores to give them a more modern appearance. All these physical changes are serving to provide the downtown area with a more pleasant water-oriented shopping area.

Thus, from the founding of Washington to the present, the relation between the town and the river has undergone a drastic change. From the town's infancy and on through the 1800's, the town had a definite economic relationship with the river as a thriving port. With the turn of the century, the waterfront began to deteriorate primarily due to the advent of modern transportation. It was not until the late 1960's that the blighting scar of the once thriving waterfront was removed. The town is now trying to establish a new relationship with the river to again revive the downtown economic status. The river will continue to play an important role in the development of Washington, but it is doubtful if the downtown waterfront area will ever be as an important marketing center as it was in the 1800's. The emphasis now being placed on the river is for recreation, a scenic ride down the Pamlico, to lure industrial prospects to Washington.

GEOGRAPHICAL SETTING

Beaufort County is located in the central coastal section of North Carolina and lies entirely within the Atlantic Coastal Plain physiographic province. Its approximately 831 square-mile land area is bound on the North by Martin and Washington Counties, and on the east by Hyde County and Pamlico

Sound, on the south by Pamlico and Craven counties, and on the west by Pitt County. The county is divided almost in half by the Pamlico River which runs east and west through the county.

Washington, the county seat, is located in the extreme western portion of Beaufort County and along the north bank of the Pamlico River at its confluence with the Tar River. Approximately 105 miles west is the City of Raleigh, the state capital; and 135 miles north is the City of Norfolk, Virginia, and the Ports of Hampton Roads.[3/]

Beaufort is the eighth largest county in North Carolina and has a total land area of 831 square miles, or 531,840 acres. At its widest points, the county extends approximately 35 miles north to south. The county is divided almost equally into northern and southern sections by the Pamlico River.

Although Beaufort County's surface is low and generally level, there are undulating and gently rolling areas near the streams in the western and southern parts of the county. The highest point in the county is along its southern border and is 67 feet above sea level. Elevations along the extreme eastern part of the county, in the vicinity of Belhaven and Leechville, range from 2 to 5 feet above sea level.[4/]

In the City of Washington and its planning area the elevations run from about three feet above sea level at Kennedy's Creek to 46 feet above in Enumeration District 31. The downtown area varies from approximately 5 to 10 feet above sea level in elevation. The U.S. Army Corps of Engineers has designated all land below 10 feet as part of the Washington flood plain zone.

[3/] City of Washington and Beaufort County: An Economic Study, Virginia Electric and Power Company (May, 1964), p. 1.

[4/] Ibid., p. 3.

The land generally rises from the river increasing in elevation to the north. The sharpest variations occur in the southwestern part of the extraterritorial jurisdiction in Enumeration District 36 where the land varies in elevation from 36 to 46 feet.

The climate of Washington, North Carolina, is relatively mild. The mean temperature for the area is 62° F. The average rainfall for the area is 49.7 inches per year. The average snowfall is less than three inches per year. An indication of the mildness of the climate can be found in the mean temperature of the traditionally harshest winter months: December, January, and February, which is 45.3° F. The average growing season is favorable for most crops. The average frost-free season extends from April to October, providing the farmers of the area with a producing season of 214 days.

DESCRIPTION OF PRESENT CONDITIONS

PART II

POPULATION

The City of Washington experienced substantial growth from 1900 until 1960. During this time the city showed a growth of +48.2% compared to a rate of +26.7% for Beaufort County. While the city showed a gain from the 1950 Census to the 1960 Census, the rate of growth during the fifties was the lowest since the 1910's; Beaufort County, on the other hand, had a net decline in population. This is evidence of two migration streams: one coming from rural areas to the city, the second leaving the county entirely when economic opportunities were not to be found in the City of Washington. However, the 1970 Census showed a different flow. While the county as a whole experienced another decline of -.9%, the city felt a sharp -9.8% decline. The migration waves during this decade were (1) out of the county and (2) out of the city, a reflection of its exceedingly poor housing conditions, and a displacement of families during urban renewal. The city's decline is even more pronounced when natural population increase from 1960 through 1970 is taken into account:

1960 Population	9939
Natural increase (births over deaths)	800*
Expected 1970 population	10739
Actual 1970 population	8961
Net outmigration	1778

Out-migration in the 1960's occurred mainly in the below 14 age group and the 24-45 age group. The over-55 categories showed major gains.

In the future the city will have more demands made on it by the middle-aged and elderly. A significant increase in the elderly population and a major decrease in those under 24 has implications in programming in the recreation department, and a slackening impact on the school system. Fewer working age people will be available for industries that might wish to locate here or to expand their operations. There will be a greater need for delivery of service to the elderly in the areas of housing, health care, and recreation.

*Source: N.C. State Department of Human Resources, Division of Health Services

TABLE 1

POPULATION TRENDS
BEAUFORT COUNTY
1900 - 1970

YEAR	COUNTY	NUMBER CHANGE	PERCENTAGE CHANGE
1900	26,404		
1910	30,877	4,473	+ 16.9%
1920	31,024	147	+ .5%
1930	35,026	4,002	+ 12.9%
1940	36,431	1,405	+ 4.0%
1950	37,134	703	+ 1.9%
1960	36,014	-1,120	- 3.1%
1970	35,980	- 34	- .9%

Source: U.S. Census of Population

TABLE 2

POPULATION TRENDS
CITY OF WASHINGTON
1900 - 1970

YEAR	CITY	NUMBER CHANGE	PERCENTAGE CHANGE
1900	4,842		
1910	6,211	1,369	28.3%
1920	6,314	103	1.7%
1930	7,035	721	11.4%
1940	8,569	1,534	21.8%
1950	9,698	1,129	13.2%
1960	9,939	241	2.5%
1970	8,961	- 978	- 9.8%

Source: U.S. Census of Population

TABLE 3

POPULATION CHANGE BY AGE GROUP AND RACE
CITY OF WASHINGTON
1960 - 1970

AGE GROUP	1960 WHITE	1960 NONWHITE	1970 WHITE	1970 NONWHITE	CHANGE 1960-1970 NUMBER WHITE	CHANGE 1960-1970 NUMBER NONWHITE	PERCENTAGE WHITE	PERCENTAGE NONWHITE
All	566	591	401	335	-165	-256	-29.2	-43.3
Under 5								
5-14	1,166	1,028	830	864	-366	-164	-28.8	-15.5
15-24	782	488	844	697	+ 62	+209	- 7.9	+42.8
25-34	753	426	565	272	-188	-154	-25.0	-36.2
35-44	798	424	591	373	-207	- 51	-26.0	-12.0
45-54	763	432	659	410	-104	-122	-13.6	- 5.1
55-64	521	308	660	401	+139	+ 93	+26.7	+30.2
65 & over	599	294	704	355	+105	+ 61	+17.5	+20.7

Source: U. S. Census of Population

TABLE 4

POPULATION CHANGE BY AGE GROUPS, SEX AND RACE: 1950-1960
FOR
CITY OF WASHINGTON

AGE	WHITE MALES 1950	WHITE MALES 1960	CHANGE Number	CHANGE PERCENTAGE	WHITE FEMALES 1950	WHITE FEMALES 1960	CHANGE Number	CHANGE PERCENTAGE
Under 5	360	302	- 58	-16.1	346	264	- 82	-23.7
15-24	474	611	+137	+63.5	388	555	+167	+96.6
25-34	461	347	-114	- 2.4	513	406	-106	-29.8
35-44	411	360	- 51	-12.4	443	438	- 5	- 1.1
45-54	285	351	+ 66	+23.2	340	412	+ 72	+21.2
55-64	224	229	+ 5	+ 2.2	251	292	+ 41	+16.3
65 & Over	162	230	+ 68	+42.0	247	369	+122	+49.4
TOTAL	2,746	2,782	+ 36	+ 1.3	3,064	3,166	+102	+ 3.3

AGE	NON WHITE MALES 1950	NON WHITE MALES 1960	CHANGE Number	CHANGE PERCENTAGE	NON WHITE FEMALES 1950	NON WHITE FEMALES 1960	CHANGE Number	CHANGE PERCENTAGE
Under 5	222	297	+ 75	+33.8	237	294	+ 57	+24.1
5-14	401	487	+ 86	+44.0	368	441	+173	+93.8
15-24	329	251	- 78	-50.4	378	237	-141	-74.6
25-34	245	197	- 48	-19.6	311	229	- 82	-26.4
35-44	255	178	- 77	-30.2	287	246	- 41	-14.3
45-54	166	184	+ 18	+10.8	216	248	+ 32	+14.8
55-64	108	144	+ 36	+33.3	115	164	+ 49	+42.6
65 & Over	111	123	+ 12	+10.8	139	240	+ 32	+23.0
Total	1,837	1,861	+ 24	+ 1.3	2,051	2,130	+ 79	+ 3.9

SOURCE: U. S. Census of Population

TABLE 5

POPULATION CHANGE BY AGE GROUPS, SEX AND RACE: 1960-1970

FOR

CITY OF WASHINGTON

AGE	WHITE MALES 1960	WHITE MALES 1970	CHANGE NUMBER	CHANGE PERCENTAGE	WHITE FEMALES 1960	WHITE FEMALES 1970	CHANGE NUMBER	CHANGE PERCENTAGE
Under 5	302	215	- 87	-28.8	264	186	- 78	-29.5
5-14	611	419	-192	-31.3	555	411	-144	-25.9
14-24	352	387	+ 35	+ 9.9	430	457	+ 27	+ 6.3
25-34	347	276	- 71	-20.5	406	289	-117	-28.8
35-44	360	278	- 82	-22.8	438	313	-125	-28.5
45-54	351	285	- 66	-18.8	412	374	- 38	- 9.2
55-64	229	274	45	+19.7	292	386	+ 94	+32.2
65 & Over	230	252	+ 22	+ 9.6	369	452	+ 83	+22.5
TOTAL	2,782	2,386	-396	-14.2	3,166	2,868	-298	- 9.4

AGE	NON WHITE MALES 1960	NON WHITE MALES 1970	CHANGE NUMBER	CHANGE PERCENTAGE	NON WHITE FEMALES 1960	NON WHITE FEMALES 1970	CHANGE NUMBER	CHANGE PERCENTAGE
Under 5	297	175	-122	-41.1	294	160	-134	-45.6
5-14	487	441	- 46	- 9.4	441	423	- 18	- 4.1
15-24	251	336	+ 85	+33.9	237	361	+124	+52.3
25-34	197	121	- 76	-38.6	229	151	- 78	-34.1
35-44	178	153	- 25	-14.0	246	220	- 26	-10.6
45-54	184	179	- 5	- 2.7	248	231	- 17	- 6.9
55-64	144	172	+ 28	+19.4	164	229	+ 65	+39.6
65 & Over	123	161	+ 38	+30.9	240	194	- 46	-19.2
TOTAL	1,861	1,738	-123	- 6.6	2,130	1,969	-161	

SOURCE: U. S. Census of Population

EDUCATIONAL ATTAINMENT

The decade of the sixties witnessed a change in the number of years of school completed with a substantial drop-off both in the number of people who had completed no schooling and in the number that had finished only elementary school through the 8th grade. A greater percentage went on to complete high school and four years of college.

TABLE 6

YEARS OF SCHOOL COMPLETED
CITY OF WASHINGTON
1960 and 1970

TOTAL	1960	1970	NUMBER CHANGE	PERCENTAGE CHANGE
Male and Female 25 yrs & over	5,347	4,995	-352	- 6.6
No School years completed	286	128	-158	- 55.2
Elementary: 1 - 4 yrs.	731	639	- 92	- 12.6
5 - 7 yrs.	1,200	881	-319	- 26.6
8 yrs.	529	484	- 45	- 8.5
High School: 1 - 3 yrs.	931	1,001	+ 70	+ 7.5
4 yrs.	941	1,147	+206	+ 21.9
College: 1 - 3 yrs	434	361	- 73	+ 16.8
4 or more	295	354	+ 59	+ 20.0
Median School years completed	8.9	10.1	+1.2	+ 13.5

SOURCE: U.S. Census of Population, 1960, 1970.

ECONOMY

Agricultural employment in Beaufort County has steadily declined since 1940, and by 1960 represented only 27 percent of total employment, 11 percent in 1970. The primary reason for this decline lies with the continued growth of mechanization and automation on the county's farms. Although over 1700 males left agricultural employment between 1950 and 1960, nonagricultural male employment increased by only 13 persons during the same period within the county.

A concerted cooperation effort on the part of business, civic, and local governmental leaders to attract an increased industrial base met with success during the sixties. Four significant plants located in the area: Hamilton Beach in 1965, a Division of Scovill Manufacturing which manufactures household appliances; Flanders Filters, Inc. in 1969, a manufacturer of filters for a variety of industrial uses; Seacrest Marine in 1971, a manufacturer of boats; and Atwood & Morrill in 1972, a valve manufacturer.

By the 1970 Census, the industrial composition of the City of Washington was predominately wholesale and retail trade with 26.3 percent of the total number of persons employed, followed by manufacturing with 21.8 percent of total number of persons employed (see tables 7 & 8).

Most occupational categories showed significant gains during the sixties as follows:

TABLE 7 CHANGE IN OCCUPATIONAL CATEGORIES

	Male	Female
Growth	private household workers clerical and kindred service workers operatives and kindred professional, technical & kindred farmers and farm managers craftsmen, foremen & kindred	clerical and kindred operatives professional, technical & kindred
No Change	laborers except farm	
Decline	farm laborers and farm foremen managers and administrators sales workers	managers and administrators sales workers private household workers

Males and females both felt declines in the number of jobs available in sales and as managers and administrators. Farm laborer possibilities again declined for men; and laborers, except farm laborers, showed no change. Private household employment declined for women, yet increased for men.

TABLE 8

INDUSTRIAL COMPOSITION

1960

INDUSTRY	NUMBER EMPLOYED	PERCENT OF TOTAL
Agriculture forestry, and fisheries	97	2.7
Construction	243	6.9
Manufacturing		
Durable	232	6.6
Nondurable	427	12.1
Transportation, communications, and other public utilities	162	4.6
Wholesale and retail trade	945	26.7
Finance, insurance, and real estate	170	4.8
Business and repair services	82	2.3
Professional and related services	399	11.3
Public administration	136	3.8
Personal services	538	15.2
Entertainment and recreation services	21	.06
No report	86	2.4
Total employed 16 years and over	3,538	

SOURCE: U.S. Census of Population

TABLE 9

INDUSTRIAL COMPOSITION

1970

INDUSTRY	NUMBER EMPLOYED	PERCENT OF TOTAL
Construction	237	6.7
Manufacturing		
Durable	254	7.2
Undurable	517	14.6
Transportation	52	1.5
Communications, utilities, and sanitary services	136	3.8
Wholesale and retail trade	932	26.3
Finance, insurance, business and repair services	184	5.2
Professional and related services	552	15.6
Public administration	110	3.1
Other industries	567	16.0
Total employed 16 years and over	3,541	

SOURCE: U.S. Census of Population

TABLE 10

MALE EMPLOYMENT BY OCCUPATION

Occupation Male	1960	1970	Number Change	Percent Change	Number as % of Total 1960	Number as % of Total 1970
Total employed 16 years old and over	2,097	3,541	1,444	68.9		
Professional, technical, and kindred	141	325	184	+130.5	6.7	9.2
Manager and administrators[1]	298	276	- 22	- 7.4	14.2	7.8
Sales workers	241	233	- 8	- 3.3	11.5	6.6
Clerical and kindred	57	488	+ 431	+756.1	2.7	13.8
Craftsmen, foremen, and kindred	354	512	+ 158	+ 44.6	16.9	14.5
Operatives and kindred[2]	480	1,300	+ 820	+170.8	22.9	36.7
Laborers except farm[3]	255	255	0	0	12.2	7.2
Farmers and farm managers	19	30	11	+ 57.9	.1	.1
Farm laborers and farm foremen	42	6	- 36	- 85.7	2.0	.002
Service workers	129	422	+ 293	+227.1	6.2	11.9
Private household workers	16	272	+ 256	+1600	.1	7.7
Occupation not reported	65	x	- 65	- 100	3.1	0

1. 1960 Census titles this category "Managers, Officers, and Proprietors except Farm."
2. 1970 Census broke this category into "Operatives except Transport" and "Transport Equipment Operatives."
3. 1960 Census titles: "Laborers except Farm and Mine."

SOURCE: U. S. Census of Population, 1960 and 1970.

TABLE 11

FEMALE EMPLOYMENT BY OCCUPATION

Occupation

Female	1960	1970	NUMBER CHANGE	PERCENT CHANGE	Number as % of Total 1960	Number as % of Total 1970
Total employed 16 years old and over	1,441	1,574	+133	+ 9.2	x	x
Professional, technical, and kindred	156	157	+ 1	+ .06	10.8	10.0
Managers and administrators[1]	60	20	- 40	-66.6	4.2	1.3
Sales workers	116	89	- 27	-23.2	8.0	5.7
Clerical and kindred	265	426	+161	+60.7	18.4	27.0
Operatives, including transport[2]	194	300	+106	+54.6	13.5	19.1
Service workers, except private household	251	280	+ 29	+11.5	17.4	17.8
Private household workers	333	256	- 77	-23.1	23.1	16.3
Other occupations[3]	33	46	x	x	2.3	2.9
No report	33	0	x	x	2.3	x

1. 1960 Title: "Managers, Officers, and Proprietors, excluding farm."
2. 1960 Title: "Operatives and Kindred."
3. 1960 Census listed 8 Craftsmen, Foremen, and Kindred, 13 Farm Laborers and Foremen, and 12 Laborers comprising 2.3% of occupations for women. 1970 Census does not indicate composition of the "other" category.

SOURCE: U. S. Census of Population, 1960 and 1970.

UNEMPLOYMENT

Unemployment in the City of Washington varies seasonally. In general, the winter months (December, January and February) have the highest rates of unemployment. In 1973, the insured unemployment high was 5.6% in December, while January, 1974, had an unemployment rate of 4.6%. February had a rate of 3.9%.

There are several reasons for seasonal variations in employment for this area. Business for the seafood industry and its subsidiaries is very slow during the winter months (fishermen, packers, etc.). Several major employers in the area close for inventory for approximately 2 to 3 weeks during the winter; style changes or production changes occur, then necessitating plant shutdowns; and agricultural activity is extremely slow.

The following is a breakdown of unemployment rates from January, 1974, to October, 1975.

Insured Unemployment

Beaufort County

January	1974	4.6%
February	1974	3.9%
March	1974	4.5%
April	1974	3.9%
May	1974	1.4%
June	1974	2.1%
July	1974	1.1%
August	1974	.9%
September	1974	1.1%
October	1974	1.4%
November	1974	2.3%
December	1974	8.5%
January	1975	13.1%
February	1975	14.0%
March	1975	14.5%
April	1975	12.2%
May	1975	6.9%
June	1975	5.5%
July	1975	4.7%
August	1975	4.0%
September	1975	3.7%
October	1975	3.7%

SOURCE: N.C. Employment Security Commission

EXISTING LAND USE MAP

(See Pocket Map in Back)

EXISTING LAND USE

This section will analyze the existing land use patterns in the Washington Planning Area as depicted on Map 3. An analysis of existing land use patterns is a necessary component of any land use plan since decisions regarding future development cannot be made intelligently without a prior understanding of existing development. However, before looking at the urban and built-up characteristics of the Washington Planning Area, let us examine the land's physical characteristics.

Physical Characteristics of Area Land

Beaufort County is underlain by a wedge of Tertiary and Cretaceous sediments which are 1,000 to 2,000 feet thick. The formations are covered nearly everywhere by the Pleistocene terrace deposits. These terraces are the outstanding physiographical features of this area and form irregular belts extending in a general northeast-southwest direction. The underlying rocks dip in a general eastward direction and consist of alternating layers of surficial sands and clays of Quaternary age and ranging from 10 to 30 feet in thickness.

Beds of blue clay, marl, shells, and shell limestone that constitute the Yorktown formation lie beneath these surficial deposits and range from 40 feet thick in the western part of the county to 200 feet in the county's eastern extremity. This Yorktown formation is underlain by layers of phosphatic sand that are separated by one or more indurated shell beds. This unit of phosphatic sand and indurated shell beds ranges from a few feet to more than 120 feet in thickness. Individual beds of phosphatic sand are as much as 20 feet thick.

Analyses of recent core samplings indicate that there are more than 10 billion tons of phosphate ore in the county and that it is economically feasible to mine. These deposits are found beneath an area covering approximately 700 square miles. The phosphate deposits in the Aurora area are found between 80 to 100 feet below the surface and range from 40 to 50 feet in thickness.

Underlying these deposits are shell limestones and interlayered calcareous sands of the Castle Hayne limestone of late Eocene Age. This formation is about 60 feet thick near the western border of the county. The Beaufort formation of Paleocene age, composed of agrillaceous sand, Glauconitic sand, and marl underlies the Castle Hayne limestone throughout most of the county. Few data are available concerning the thickness of the Beaufort formation. Two miles north of Washington, the formation is 35 feet thick and, according to limited data, the formation thickens rapidly and is buried progressively deeper towards the east. Underlying the Beaufort formation are glauconitic sands and micaceous clays of the Peedee formation of late Cretaceous Age. No data regarding the total thickness of this formation in Beaufort County are available. One mile west of Washington, the top of the Peedee was penetrated at a depth of 158 feet below sea level. In eastern Beaufort County, extrapolated data indicate that the top of the Peedee formation lies about 700 to 800 feet below sea level. Beneath the Peedee formation are older Cretaceous sediments.[5]

Surface Water

Beaufort County is drained by relatively slow-moving streams that flow into the Pamlico and Pungo rivers. These, in turn, empty into Pamlico Sound. Although the construction of deep drainage ditches has made much swampland available for agricultural purposes, there still remains much swamp area in the county. These reclaimed swamplands are among the most fertile in the state.

The chemical character of surface waters is influenced in varying degrees by geochemical processes, rainfall, run-off, winds, tides, and stream pollution. Hurricane winds in 1955 forced salt water up the Tar River for a distance of approximately 10 miles upstream from Washington. Sea water remained at advanced points on the Tar River during most of 1955 (water year) due to the combination

[5]Ibid., p. 12.

of prevailing winds and low rainfall in the watershed area.

Streams in North Carolina's Coastal Plain physiographical province carry sediments consisting of sand, clay, and limestone, and marl. The color of the waters in these streams varies with the season and river discharge. Generally, the higher colors occur during periods of relatively heavy rainfall (late summer and early fall) when colored water and decaying organic matter are flushed from the swampy areas.[6]

Pamlico River - The largest body of water in the Washington Planning Area is the Tar-Pamlico Estuary. This river flows past Washington, one side forming the city limits. The Pamlico River is a large coastal river with physical, chemical and biological characteristics usually associated with an estuary. Except for a gradual increase in salinity gradent increasing to the east (in the direction of the Pamlico Sound), there is little variation in chemical and physical characteristics throughout its length. The river is relatively shallow and contains a spotty distribution of aquatic vegetation. The direction of water movement is subject to the vagaries of wind.

Pantego Creek - is a large brackish water stream. At the point where the sample was taken, the creek cover has been destroyed and a heavy layer of silt covers the bottom. This area is now a poor fishing area.

Runyon Creek - This is a small turbid stream which appears to have been dredged. This stream drains a large portion of the eastern part of Washington.

Cherry Run - is a small black water stream of the lower coastal plain. This stream has been declared a floodway by the Corps of Engineers. Cherry Run drains a large portion of the western side of town.

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[6]Ibid., p. 12.

Ground Water

With the exception of the supply for the town of Washington, all public and private water supplies in Beaufort County are obtained from wells. Surficial sands of Quaternary age and near-surface sand and shell beds of the Yorktown formation furnish water to shallow dug wells and driven wells that extend to a depth of 30 feet. A yield of 2 to 30 gpm can be expected from shallow wells in this material. Such wells are commonplace throughout the entire county. In central and eastern Beaufort County, drilled wells obtain water from lenticular sands and shell beds in the Yorktown formation and from shell limestones and calcareous sands in the underlying Castle Hayne limestone. These wells range in depth from 100 to 300 feet and yield as much as 300 gpm. The depth of an individual well is largely determined by the area in which it is drilled, by the quantity and quality of water desired, and by individual driller's preference. Several wells in central Beaufort County obtain water from the Beaufort formation. However, this aquifer is seldom utilized in the eastern and central sections of the county because of the abundance of water in overlying aquifers. Water below a depth of 30 to 50 feet in this area is under artesian pressure and flowing wells are very common. Much of the land is only a few feet above sea level and the piezometric surface is generally within 15 feet of land surface or higher. In western Beaufort County, water is obtained from the Castle Hayne limestone, the Beaufort formation, and less commonly from the Peedee formation. The relative thinness of the Castle Hayne limestone in this part of the county limits its value as an aquifer. Where large quantities of water are desired, wells must tap the Beaufort and Peedee formations or, if tapping the Castle Hayne limestone, must be of large diameter. Yields of several hundred gallons per minute may be expected from deep wells in this area.

The chemical quality of groundwater in Beaufort County is not uniform. Water from the surficial sands contains objectionable iron and is generally corrosive. Water from the shell beds and impure limestone layers of the Yorktown formation is moderately hard. Water from the shell limestone layers and calcareous sand layers of the Castle Hayne limestone is moderately hard to very hard and may contain objectionable amounts of hydrogen sulfide, particularly in the eastern sections of the county. Most of the water from the Beaufort and Peedee formations is soft, but may be hard if the water is emanating from calcareous strata. At Washington and Belhaven, several wells yield waters relatively high in chloride. Available data indicate that the chloride probably results from a lateral infiltration of brackish surface water into the aquifer as the wells are pumped. Relocation of supply wells at a greater distance from brackish surface waters in these areas would result in a lower incidence of chloride content.

Large supplies of groundwater are available throughout the county from aquifers of Mesozoic and Cenozoic Age. Present use of groundwater in the county is only a small amount of the total water available.[7]

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[7] Ibid., pp. 10-11.

"URBAN AND BUILT-UP LAND CHARACTERISTICS"

Residential Use

Since 1960 residential development has occurred throughout the area. Most development has taken place in the northern and eastern portions of the planning area, particularly in the area of the airport to Fifteenth Street, and along U. S. Highway 264 from John Small Extension to the edge of the Planning Area. Recent subdivision developments indicate that future development will continue in this direction. The western portion has experienced moderate residential growth while the southern portion has experienced light residential development. As pointed out in the 1970 Plan, the southern area is largely floodplain and swampland. These areas pose severe limitations for residential development.

Commercial Use

The primary retail development in the CBD is located within a relatively compact area extending westward along West Main Street for approximately two and one-half blocks from the Main Street-Market Street intersection. Effort should be made to keep this development in a compact area since it functions more efficiently in this arrangement.

Of all the outlying commercial areas in the planning area, only one can be described as a "planned neighborhood shopping center." The Washington Square Shopping Center is a small shopping center located on Fifteenth Street between Washington Street and U. S. Highway 17.

There are several highway business areas located in the Washington Planning Area. The most easily recognized highway business area is located along U. S. Highway 17 between Ninth Street and Fifteenth. This is also the fastest developing strip commercial area in the city. Another area which is easily recognized is located north of the Tar and Pamlico River along Highway 17.

Probably the poorest example of a highway business area is located on Highway 17 from Main Street to the Fifth Street intersection because of inadequate parking, incompatible mixture of uses and dilapidation of some structures.

Other major commercial districts are located along West Fifth Street from Hackney Avenue to Wilson Street and along John Small Avenue from Eighth Street to Highway 264 intersection. These areas have developed with relatively low traffic generating secondary retail uses. Yet, caution should be taken as future development occurs to protect surrounding residential areas from excessive strip development.

Industrial Use

One concentration of industrial activity in the planning area is in the western portion of the city along the Atlantic Coast Line Railroad west of Hackney Avenue. The wholesale development along Hackney Avenue helps to serve as a buffer between the industrial activities and the residential uses to the east.

A second major concentration of industrial activity is developing in the eastern portion of the city next to Runyon's Creek along Fifth Street. The expansion possibilities are limited for this area. Due to the existing inter-mixture of industrial and residential uses in this area, the major land use planning effort should be devoted to the establishment of well-defined limits for the expansion of industrial activities.

In addition to the two areas mentioned previously, the Hamilton Beach Corporation has established a manufacturing plant on 39.5 acres of land within the planning area. It is located on N.C. Road 1509 just off of U. S. Highway 17 North. The surrounding area should begin to develop in the future due to the present plant location and easily accessible transportation facilities.

There has been an intermixture of land uses within the industrial districts in the Washington Planning Area in the past. Although this intermixture still exists, there has been an effort made toward the prevention of incompatible land uses within the City of Washington through enforcement of the city's land use controls such as zoning regulations.

Agricultural

Essentially, little agricultural activity is conducted within Washington's city limits. The majority is conducted in the northern portion of the one and one-half mile area. All agricultural lands are either currently devoted to crop production or have crop production as their primary function.

Forestland

The most extensive areas of forestland are located in the southern portion of Washington's one and one-half mile area. These lands lie adjacent to the Pamlico and Tar rivers.

Floodplain

The susceptibility of areas to frequent flooding during periods of heavy or prolonged precipitation is an important factor in determining the location of future development in the Washington Planning Area. The construction of private and public structures in floodplains presents the potential loss of lives and property. Map 4 delineates Washington's flood hazard areas.

Compatibility Problems and Future Implications

Several land use compatibility problems have resulted in the Washington Planning Area. Some of these problems have since been addressed by strict code enforcement. Nevertheless, the following are the most frequently cited land compatibility problems in the area.

1. A large amount of residential development has been allowed on small lots with inadequate frontage.

2. Many existing vacant lots set aside for residential development are too small for pleasant living conditions.

3. Substandard housing conditions were created because of poor planning practices, the intermixing of incompatible uses with housing and inadequate building and housing code enforcement.

4. Many public facilities have been developed on sites too small for expansion.

5. In the past, not enough land has been allocated for recreational purposes.

6. Strip and spot commercial uses have not been effectively regulated in the past; consequently, inefficient land use patterns have been created, the traffic-carrying capacity of major streets has been decreased, and in some cases, property values have decreased.

7. Residential and manufacturing uses, not appropriate for a downtown location, located in the Central Business District.

8. Land set aside for industrial use in the past has not been suitable for industrial development.

9. Some potential industrial sites have been eliminated in the past by spotty development and the subdivision of large tracts of land into smaller, haphazardly arranged tracts.

As stated in problem #6 above, spot and strip commercial uses have resulted in inefficient land use patterns which have created traffic problems. As future development occurs, caution should be taken to protect the Washington community from strip development. Usually, strip development places

additional demands on city service facilities; and by the nature of the uses located in the stripped area, ultimate abandonment and deterioration of structures occurs.

Strict enforcement of land use controls will alleviate many present problems from developing in the future.

AREAS EXPERIENCING OR LIKELY TO EXPERIENCE MAJOR LAND USE CHANGE

Washington's urban renewal area is experiencing and will continue to experience major land use changes during this planning period. Urban renewal began in Washington, North Carolina, in 1961 with the formulation by the City Council of a Citizens' Committee to investigate the possibility of establishing an urban renewal program in the city.

It was widely accepted at that time that about 50 percent of all the houses in the city limits were substandard and needed substantial repairs or demolition. After an extensive study by the Citizens' Committee, the City Council formulated the Redevelopment Commission charging it with the responsibility of moving forward with an urban renewal program.

The Redevelopment Commission, in conjunction with the city, drew up a master plan of the city outlining the areas that needed treatment. It was agreed that this plan of attack would begin in the eastern part of the city and progress westwardly to the areas which contained the worst housing conditions. There were several reasons for this plan, including gaining urban renewal experience before proceeding to the worst sections of town, taking advantage of rehabilitation aide to prevent the eastern part of the city from becoming a slum, and taking advantage of non-cash credits which accrued to the city as a result of work already done in the eastern section.

In December, 1962, the East End Urban Renewal Plan was formally launched. This 425-acre area combined slum clearance with rehabilitation. At the time, the project area comprised approximately one-third of the corporate city limits. The project met with considerable success, About 20 acres of slums were leveled, and cleared land devoted to parks, recreation, and private development. Families were located in the new public housing area built to serve this relocation need. Many streets and sidewalks were paved, new utility lines were installed, and much work, including two new bridges, was done to the Jack's Creek storm drainage basin. Many houses were upgraded through the rehabilitation program.

Urban Renewal Project No. 2 was the Washington Heights Area, which was situated along the easternmost border of the city. This 45-acre area was totally cleared of deplorable housing, some of which had no electricity or inside toilet facilities. It was devoted to a 30-acre elementary school site, a 10-acre park, and 5 acres for a portion of a public housing project in this area. It is now one of the most attractive sections in town. It has a school campus excelled by none in this part of the state.

The third project, the Downtown-Waterfront Area, was undertaken at a time when the city was contemplating cleaning up a run-down, dilapidated waterfront containing many abandoned warehouses, dead end streets, decrepid wharfs, rotting pilings, and other run-down buildings. The intent of this plan, is so far as possible, was to create a shopping center out of the downtown area by constructing new parking lots, to rehabilitate stores, and to better the automobile access to the downtown area.

This project is now drawing to completion. The waterfront area in Washington is a favorite spot for visitors. One can travel along Stewart Parkway and view the Pamlico River. The parkway is lined with cherry trees and other shrubs and landscaping. The latter development induced the City

Council to remove all off-street parking meters in the CBD. Many stores have been renovated to include rear entrances to the parking lots. The area is often frequented by passing yachtsmen who tie up temporarily along the bulkhead area. The Main and Market street areas have been converted into a semi-mall with landscaping, more and better lights, and improved access by way of numerous alleys from business districts to off-street parking. This project has resulted in an out-of-state seafood restaurant being built in the project area, as well as a new office building and a wholesale seafood establishment. Open space has been preserved along the waterfront for the benefit of the public for the years to come.

With the final completion of the East End and Washington Heights projects, and with the virtual completion of the Downtown project, the Redevelopment Commission and the city turned their attention to the West End area which contained the worst slums in the city. A master plan of the 170-acre project was developed. This was a General Neighborhood Renewal Plan study. The area was carved into three logical projects - West End 1, 2, and 3. West End 1 got underway early in 1970. This 40-acre project cleared the substandard houses and left the homes that could be rehabilitated through the urban renewal program. It is interesting to know that all the homeowners in the area who were displaced continued to be homeowners after they were relocated. Other families were moved to available housing units.

Streets have been paved in the project area, and the bulk of the land was devoted to a new 82-unit low-rent housing project. However, some lots are being made available for private residential development. West End 1 was completed by early 1975.

Some areas are experiencing commercial growth. One such area is developing along Highway 17 South across the Pamlico River. Limited

commercial activity is expected to continue in this area. However, any commercial development not presently zoned in this area should be cautioned in order to safeguard the area from excessive strip development.

The eastern portion of the Planning Area is expected to develop residentially with supporting commercial and institutional services. As a matter of fact, a substantial portion of this area is under study for annexation. Continued development of these areas is encouraged.

TABLE 12 CURRENT PLANS, POLICIES, AND REGULATIONS

		Date Completed
1)	Population and Economy	1963
2)	Community Facilities Plan	1963
3)	Land Use Plan	1963
4)	Public Improvements Program	1965
5)	Zoning Ordinance	1971
6)	Subdivision Regulations	1965
7)	Flood Plain Information on Pamlico River at Washington, N. C.	1965
8)	Park and Recreation Study	1967
9)	Neighborhood Analysis	1967
10)	Capital Improvements Budget	1969
11)	Minimum Housing Element	1969
12)	Updating of Land Development Plan	1970
13)	Initial Housing Element	1970
14)	Updating and Revision of Zoning Ordinance	1971
15)	Annexation Report	1971
16)	Comprehensive Water and Sewer Study	1971
17)	Community Facilities Update	1972
18)	Housing Element Update	1972
19)	Proposed Water and Sewer Extension	1972
20)	City of Washington Reconnaissance Study	1972
21)	Zoning Revised - June 1973	1973
22)	Capital Improvements Budget	1974
23)	Annexation Study	1974
24)	Washington Thoroughfare Plan	1962
25)	Washington Thoroughfare Plan Update	1970

SOURCE: Washington City Hall

CURRENT PLANS, POLICIES AND REGULATIONS

Plans and Policies

a) "Transportation Plans"

The following transportation description is taken from the Washington Land Development Plan dated 1970.

A thoroughfare plan was completed and presented to the city in August, 1962, by the Advanced Planning Department of the North Carolina State Highway Commission. The system of major thoroughfares supplemented by a number of minor thoroughfares will remain practically the same as those proposed in the 1962 Land Development Plan.

In August, 1970, a revised thoroughfare plan was presented to the City of Washington and subsequently adopted by resolution. The major differences between the 1970 plan and the 1962 plan are as follows.

Proposed Highway 264 Relocation

U. S. Highway 264 has been proposed to be rerouted from Greenville to Washington by redesignation of N. C. 33 as U. S. 264. It is further proposed that U. S. 264 by-pass the City of Washington to the north. This by-pass will be a limited access road with interchanges at three intersections; U. S. 17, Market Street Extension, and SR 1507.

Brick Kiln Road

This thoroughfare is recommended to be extended from River Road north to the intersection of SR 1501 and SR 1507. This road would then provide direct access to proposed U. S. 264 from the River Road and Washington Park. Right-of-way acquisition should begin about the time right-of-way acquisition for proposed U. S. 264 by-pass is complete.

West Third Street

It is now felt that West Third Street should not be extended as a minor thoroughfare to SR 1403. Therefore, it is recommended that Third Street extend only to Plymouth Street. Consequently, Plymouth Street to West Fifth Street will become a part of the Thoroughfare Plan as a connector street from Third to the main thoroughfare at Fifth Street. No right-of-way acquisition is thereby needed and the moving of traffic in this area is still accomplished.

Washington Street

Washington Street will remain a minor thoroughfare from Bridge Street to 15th Street. However, a minor thoroughfare along the boundaries of the airport might hamper future airport development and create a possible indirect safety hazard. Therefore, it is recommended that Washington Street not be extended to Market Street Extension from 15th Street.

Reed Drive

Reed Drive is proposed as a minor thoroughfare in the Smallwood area of Washington. The right-of-way has been acquired, and this area is being developed at this time.

The outer loop system will begin at River Road and the Brick Kiln Road and proceed along the Brick Kiln Road and proposed Brick Kiln Road to the intersection of SR 1501 and SR 1507. As proposed, the loop from this point will consist of SR 1501 and SR 1506 following a proposed route to SR 1509. State Road 1509 will be utilized as part of the outer loop and it is proposed that it continue across U.S. 17 to, at present, an unspecified point where it will fork, with the western fork connecting to N. C. 33 and the eastern fork tying in with SR 1403.

This proposal deviates somewhat from the 1962 Thoroughfare Plan and at this time no effort has been made to acquire right-of-way at any point along this route.

The 1962 Thoroughfare Plan proposed approximately three and one-half miles of new right-of-way. This mileage was broken down into the following:

1. An extension of 3rd Street west to Clark's Neck Road. Approximately .8 mile.

2. An extension of 15th Street west to the Whispering Pines Road. Approximately .6 mile.

3. An extension of Washington Street north to Market Street Extended. Approximately .9 mile.

4. An extension of Avon Avenue west to Market Street Extended. Approximately .8 mile.

5. An extension of Hudnell Street to Twelfth Street. Approximately .4 mile.

Since 1962 only the extension of Hudnell Street for a distance of approximately .4 mile to Twelfth Street has been completed. This extension connects Pennsylvania Avenue, U. S. 264 and Highland Drive.

The small amount of implementation over the past eight years is more a result of a change of city policy and needs rather than general apathy by the city administration or physical construction which may have interfered with the

implementation of the 1962 plan. The City of Washington has an extensive program to upgrade existing streets to make them more functional and to provide better traffic circulation. New streets and parking areas, not mentioned in the 1962 Plan, have been constructed and are in constant use (e.g....Stewart Parkway and the waterfront parking areas).

Development just west of the city has not been as great as was expected in 1962, and it is not now anticipated that this area will develop during the planning period to the extent that a new road connecting Third Street and Clark Neck's Road will be justified. This proposed road, if constructed, would not only be costly because of topography and drainage conditions, but would also duplicate the functions of the Old Pactolus Road. Therefore, this proposed road is not felt to be needed during the planning period and is eliminated in the 1970 Proposed Thoroughfare Plan.

The 1962 proposal, extending 15th Street to Whispering Pines Road, is still needed to handle the expected traffic when the commercial development along 15th Street is completed. This extension would eliminate some of the traffic congestion expected along Hackney Avenue and Bridge Street. Much of this traffic congestion will be created by the Washington Square Shopping Center. It is recommended that the city acquire the right-of-way for this extension within the next two years.

Because of the potential of the Warren Airport and its future value to the city, it is recommended that the 1962 proposal of extending Washington Street to Market Street Extended be eliminated in the 1970 Plan. It is felt that the completion of this street would open the airport area to urban-type development and create possible safety hazards. It is the desire of the city to keep the Warren Airport area as unencumbered and as free of development as possible.

No action has been taken on the proposed extension of Avon Street to Market Street Extended because this area remains in agricultural use. The city should be able to implement this segment of the Thoroughfare Plan as this area is developed. When this area does begin to develop, the plans for this area should be presented to the Washington Planning Board for their study and approval. By means of land use controls, now in effect for the city, the planning board will be able to guide this development to coincide with the objectives of the Thoroughfare Plan. At this time, there is no need for this proposed street. However, as the city continues to grow in that direction, there will be a need and ,therefore, it shall remain as part of the 1970 plan.

It is also recommended that the city begin to take steps to acquire right-of-way connecting Brick Kiln Road with the Slate Stone Road. Although this acquisition is not felt to be immediate, action should be taken during the early portion of the planning period. (This link will provide easy access to proposed new U. S. 264.)

b) Community Facilities Plans

Washington adopted a Community Facilities Plan in 1963. This plan inventoried and studied existing public facilities and services in Washington for the purpose of determining the adequacy or inadequacy of the present activities in meeting present and future needs before the demands became acute and the cost unreasonable. The Community Facilities Plan was updated in 1970.

c) Utilities Extension Policies

The City of Washington owns and operates the electrical distribution system for the city and a sizeable area of its environs. Service connections are provided free to area residents. Others must guarantee revenue equal to capital investment within a four-year period.

d) Open Space Policies

Washington has no stated policy for preservation of open space.

e) Recreation Policy

Washington has a full-time Recreation Director. The current policy of the Recreation Department is to enforce its Comprehensive Park and Recreation Plan.

f) Previous Land Use Studies

The City of Washington has had prepared two major land use plans: the first plan in 1963 by the Division of Community Planning of the Department of Conservation and Development, the second plan by the Department of Local Affairs of the Division of Community Planning in 1970.

The 1963 plan was deeply concerned with two major land use problems. The first problem was the Central Business District and the need to keep it as the location of the primary retail and civic activity. The 1963 plan, in fact, stated that this was the "key element of the land use plan." The plan envisioned that all property within the CBD would be used for commercial purposes. This, however, has not been achieved; and at the present time there is still residential usage within the CBD. The plan also stated need for Washington to take advantage of its unique water front CBD and make it into an "exciting" shopping area. The plan went on to state that there would be no need for a major shopping center in Washington during the planning period because the CBD would be able to provide all of the necessary retail outlets. The plan did call for, however, the development of "planned neighborhood convenience centers" at the intersection of major streets. The plan suggested that these areas should have common off-street parking and limited access, along with buffers to protect the surrounding residential areas.

Another aspect of the 1963 plan was its suggestion that industry be concentrated along Hackney Avenue and south of N. C. 33. The reason for this

suggestion was that in this area there was plenty of transportational facilities, and a majority of the industry in Washington was already located here.

Light industry, on the other hand, was proposed for the area east of Hudnell Street. The major purpose in this was to give definite boundaries to an area that already had developed into a light industrial zone.

The 1963 plan went into more detail suggesting development plans for residential, commercial, thoroughfare plans and many other areas.

The 1970 plan built upon the basis of the 1963 plan and suggested improvements in areas that were found to be lacking in the 1963 plan. For example, the 1963 plan stated that "no large scale shopping center will be required during the planning period because the location of the CBD enables it to serve the entire planning area." This proved to be a miscalculation because the city substantially increased its corporate limits to the north. It was a result of this increase that the 1970 plan stated "that a shopping center will be required during the planning period." The 1970 report went on to suggest that the "center should develop on the site of the present Washington Square Shopping Center."

While the 1963 plan called for the elimination of all non-commercial uses within the CBD, the 1970 plan was more realistic by recognizing that this would be a long, slow process.

While the 1963 plan called for neighborhood convenience shopping centers with control over their development, the 1970 plan suggested even tighter control of these areas through the use of adequate common off-street parking areas and by limiting access into these areas consistent with traffic volumes on streets where they are located.

The proposed concentrations of industrial usage around the area west of Hackney Avenue and south of NC 33 in the 1963 plan was reiterated in the 1970 plan. The 1970 plan suggested that the individual lots in this area should be assembled into large tracts and made available to prospective industrialists.

g) Prior Land Use Policies

Prior to the adoption of the 1971 Zoning Ordinance, there are no known land use policies governing the Washington Planning Area.

LOCAL REGULATIONS

a) Zoning Ordinances

Washington adopted its first zoning ordinance in 1971. This document regulates structure and land use in Washington and the extraterritorial area. A completely revised zoning ordinance was adopted in June, 1973.

b) Subdivision Regulations

The purpose of the City of Washington's subdivision regulations is "to establish procedures and standards for the development and subdivision of land within the corporate limits and extraterritorial jurisdiction of the city in order to promote the public health, safety and general welfare of the community." These regulations, in part, are designed to secure safety from fire, panic, and other dangers; to provide adequate light and air; to prevent the over-crowding of land and avoid undue concentration of population; to facilitate adequate transportation, water, sewage, schools, parks, playgrounds, and other public requirements;and to help conserve and protect the physical and economic resources of the city and its environs.

The city ordinance regulates lot sizes, block sizes, street widths, easements, sanitary conditions, and the process and data required for plat approval. The minimum lot size required by the city is regulated by the

zoning ordinance according to the zone the lots will be located in; however, the subdivision ordinance places restrictions on areas that do not or will not have city water and sewer. The ordinance requires that where city water and sewer are not available and individual water supplies or sewage systems are planned, then the subdivider have the area investigated by the County Health Department to determine if the area is suitable for this type of use. The ordinance requires the areas tested by the Health Department have their lot size increased as the result of the percolation test and subsoil investigations dictate; however, no lot with individual systems is allowed to be less than 15,000 square feet. When only individual sewage systems are planned, the ordinance requires that the minimum lot size be 10,000 square feet.

The subdivision regulations also require that corner lots "shall have an extra width of 15 feet to permit adequate building setback from side streets." Along with this, every lot is required to front or abut on a public street.

The size of blocks is also regulated by the ordinance. The requirements are that the blocks shall "not exceed 1,200 feet or be less than 400 feet and shall have sufficient width to provide for two tiers of lots of appropriate depth." Pedestrian ways or crosswalks are required by the ordinance where the Planning Board deems them necessary.

The city also regulates street width and location under its subdivision regulations. The streets are required to conform to the arrangement, width, and location indicated on any official plans or maps for the city. In areas for which such plans have not been completed, the ordinance requires "that the streets shall be designed and located in proper relation to existing and proposed streets, to the topography, to the natural features, and to the proposed use of the land." The streets must provide for the continuation or appropriate projection of principal streets in surrounding areas to provide for reasonable means of ingress and egress for surrounding tracts. The street

grades are not to be steeper than 5% nor less than 1/4 of one percent on any street without special permission from the Planning Board.

c) Floodway Ordinances (Flood Zoning Ordinance)

The City of Washington has adopted a flood zoning ordinance as required by the Federal Flood Insurance Program to qualify for flood insurance. The ordinance declares that "in the interest of public health, safety, and welfare, the regulations of the floodway zone, floodway fringe zone, and the high hazard districts are intended to protect areas of the flood plain subject to and necessary for flood waters." The ordinance states the specific intent of these zones is to (1) restrict or prohibit uses which are dangerous to health, safety, or property in times of floods or cause excessive increases in flood heights or velocities; (2) require that uses vulnerable to floods, including public facilities which serve such uses, be protected against flood damages at the time of initial construction; (3) protect individuals from buying lands which are unsuited for intended purposes, due to flood hazard; (4) meet the needs of the streams to carry flood waters and protect the creek channels and flood plains from encroachment so that flood heights and flood damage will not be appreciably increased. The ordinance is intended to permit only that development within the floodplain which is appropriate in the light of the probability of flood damage and presents a reasonable social and economic use of the land in relation to the hazards involved. The ordinance requires that each zone have only that type of development in it that will not be endangered in the event of a flood. The regulations on each differ because each zone was set up to deal with a different type of problem. The floodway zone was established to preserve the flood-carrying capacity of the streams in the city. The floodway fringe and high-hazards zones were established above the ten-foot hazard mark or the flood-proofing of the structure.

The city Building Inspector is charged with the responsibility of administering and enforcing the code. Any violation of the ordinance constitutes a misdemeanor. The Building Inspector is required to give any person, firm, or corporation a "reasonable opportunity not to exceed 30 days" to correct violations before pursuing other legal remedies.

A Certificate of Compliance shall be issued by the Building Inspector as required by the city's zoning ordinance prior to the use of any building, structure, or land and prior to the change or extension of a non-conforming use. To obtain a Certificate of Compliance, application must be made to the Building Inspector with the following information: plans drawn to scale showing the nature, location, dimensions, and any existing or proposed elevations of a lot, structures, fill, storage of materials and the location of the foregoing in relation to the channel, the floodway zone, floodway fringe zone, high hazard district and the flood protection elevation. Any existing or proposed elevations must be tied to the City of Washington Datum or the United States Geological Survey Benchmark. The builder may be required to submit certification by a registered engineer or architect showing that the finished fill and building flood elevations, flood-proofing and the flood protection measures were compiled within the framework of the ordinance.

Special exceptions may be granted within the floodway, floodway fringe zone and high-hazard district by the Board of Adjustment as long as sufficient evidence is presented that the structure will be protected by flood-proofing or other means of flood protection elevation. An application for special exceptions shall be made to the Planning Board. The Planning Board will then forward the application along with a recommendation to the Board of Adjustment. The Planning Board and Board of Adjustment must base their decisions on Article 3, Section 5 of the ordinance which is entitled "Matters

to be Considered in Passing Upon Application" (for special exceptions). The basic considerations that the boards must take into account are (1) the probability of materials being swept onto other lands or downstream to the injury of others, (2) the proposed water supply system and sanitation systems and the ability of these systems to prevent disease, contamination and unsanitary conditions, (3) the susceptibility of the proposed facility to flood damage and the effect of such damage on the individual owner, (4) the importance of the service to the community, (5) the availability of alternate areas, (6) the compatibility of the proposed use with existing development anticipated in the reasonable future, (7) the relationship of the proposed use to the comprehensive plan and floodplain management program for the area, (8) the safety of access to the property in times of flood for ordinary and emergency vehicles, (9) the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site, and (10) such other factors which are relevant to the purpose of the ordinance.

The city's ordinance is a detailed document covering all aspects of flood plain zoning. The city has taken appropriate measures to control future development in the flood zone and has no desire to see any duplicate enforcement mechanisms set up by the State of North Carolina under the provisions of the Coastal Area Management Act.

d) Building Codes

The City of Washington enforces North Carolina State Building Codes in addition to city building regulations. These codes set forth conditions and identify dwellings which are unfit for human habitation due to dilapidation; defects increasing the hazards of fire, accidents and other calamities; lack of ventilation, light and sanitary facilities; and other conditions rendering such dwellings unsafe or unsanitary, and dangerous and detrimental

to the health, safety and otherwise inimical to the welfare of Washington residents.

e) Septic Tank Regulations

The City of Washington provides municipal water and sewer to its residents. Septic tank regulations are more applicable to the extraterritorial area. These regulations are enforced by the Beaufort County Health Department.

f) Historic Districts Regulations

The City of Washington does not have historic district regulations.

g) Nuisance Regulations

The City of Washington has adopted a nuisance ordinance which defines a nuisance and directs the steps to be taken if a nuisance occurs. A vacant lot or a parcel of land is declared a nuisance when any one of the following conditions exist:

1) "uncontrolled growth of noxious weeds or grass in excess of 18 inches or threatening to cause a hazard detrimental to public health or safety"

2) "any accumulation of animal or vegetable matter that is offensive by virtue of odors or vapors or by the inhabitance therein of rats, mice, snakes or vermin of any kind which is or may be dangerous or prejudicial to the public health."

3) "any accumulation of rubbish, trash, or junk causing or threatening to cause a fire hazard or causing or threatening to cause the accumulation of stagnant water or causing or threatening to cause the inhabitation therein of rats, mice, snakes, or vermin of any kind which is dangerous or may be dangerous or prejudicial to the public health."

4) "any condition detrimental to the public which violates the rules and regulations of the county health department."

The ordinance places upon the City Manager, after he receives notification from any person that such conditions exist, the responsibility of ordering an investigation by the appropriate city official. Once the investigation is made and it is determined that there is a nuisance, the City Manager is then

required to notify the owner, occupant, or person in possession of the property in writing and "shall order the prompt abatement thereof within 10 days from the owner's receipt of such written notice." If the order is not complied with, the City Manager "shall cause such condition to be removed or otherwise remedied" by use of city personnel or an independent contractor. A written notice to the owner, occupant, or person in possession of the property shall be considered sufficient notice. The ordinance then requires that the Tax Collector prepare a statement of charges (the actual cost incurred plus a ten dollar administration fee) which is to be mailed to the owner, occupant, or person in possession of the property with instructions that the charges be paid within 30 days. The ordinance then states that if the bill is not paid within this time period that a lien for the amount shall be put on the land.

In actuality, liens are not being attached to the property for the collection of weed control bills, due to the involved legal procedures required such as running legal advertisements, calling for a public hearing, and the holding of a public hearing.

h) Dune Protection Ordinances

Not applicable to the Washington Planning Area.

i) Sedimentation Codes

The city does not presently enforce sedimentation control. The State of North Carolina is currently enforcing sedimentation control within Beaufort County.

j) Environmental Impact Statement Ordinances

While the city has no EIS ordinance, an EIS provision is included in various land use control ordinances.

FEDERAL AND STATE REGULATIONS

The state guidelines for preparation of these plans require that state and federal regulations be listed and discussed. The N. C. Department of Natural and Economic Resources was to prepare such a listing and discussion for inclusion in the Coastal Area Management Act plans. However, these regulations have not been presented to date. When available, these regulations will be presented for inclusion in the Washington Land Use Plan.

ENFORCEMENT AND INSPECTIONS

Enforcement

The Washington City Inspector coordinates enforcement of plans, ordinances, and policies. The City Inspector Office is well organized and capable of continuing to provide effective enforcement of land use controls.

The enforcement procedure concerning the city's subdivision regulations is tied directly to the approval or rejection of the subdivision plat. The ordinance requires that a preliminary plat be submitted to the City Manager at least two weeks before consideration of the plat by the Planning Board. The City Manager will make a recommendation to the board after he has checked to make sure the plat conforms to all city subdivision regulations. The Planning Board may accept or reject the plat but the ordinance requires that its reasons be stated in the minutes and recommendations "made on the basis of which the proposed subdivision could be approved." Once the plat is approved or the necessary changes have been made, the subdivider is required to present the final plat within three months after the approval of the preliminary plat. The City Council is empowered by the ordinance to either accept (totally or conditionally) or reject the final plat. If approval is given, the subdivision will have it recorded with the County Register of

Deeds. If the plat is denied, the City Council must state its reasons and make recommendations concerning the needed changes. Unless a plat is approved by the City Council,no building permits will be issued and the plat shall be considered null and void.

Inspections

The City of Washington has adopted ordinances regulating housing, zoning, installation of electrical equipment, building practices, plumbing, and cooling and heating systems. Many of these regulations have been adopted by the City of Washington from state and national codes. The building code, plumbing code (with a few exceptions), and the heating and cooling system code were adopted from state codes while the electrical code was adopted from a national code. These codes are detailed and form a rather extensive body of law.

The city ordinances provide for a building inspector and assistants as he has need for them. The city presently employs two full-time inspectors--one building inspector and one housing inspector. The building inspector is responsible for determining violations of the zoning regulations, the building code, the electrical code, the plumbing code, and the heating and cooling code. The housing inspector is mainly responsible for minimum housing inspections and assists the building inspector with his duties.

The building inspector is charged with the responsibility of enforcing all state and local laws governing installations of electrical and cooling systems under the electric code. In enforcing the building code, the inspector is required to "perform all the duties prescribed by the General Statutes of North Carolina and all other applicable statutes." The city plumbing code gives him general charge and supervision over all plumbing done in the city and requires him to make certain all plumbing conforms with the code. The Building Inspector is charged with the responsibility of

administering and enforcing the zoning regulations adopted June 11, 1973.

All the ordinances enforced by the Building Inspector follow the same mechanics for enforcement and appeal with the exception of the zoning ordinance. There are three basic steps in enforcement and appeal:

1. A written notice to the property owner or his agent notifying him of the corrections that need to be made.

2. In the event the owner or his agent disagrees with the inspector's interpretation of the code, appeal may be made within 48 hours by filing a written appeal with the City Manager stating his objections.

3. The City Manager's decision is final except for appeal to the Superior Court of the County by a writ of certiorari.

The procedure followed in enforcing the zoning ordinance differs from the enforcement of other ordinances in that any appeal from the Building Inspector's decision may be taken to the Board of Adjustment, the decision of which is final within the city government structure. However, one may appeal to the Superior Court of the county through a writ of certiorari. In all matters of appeal after a decision has been rendered at the highest level provided by the ordinances, the matter is turned over to the city's attorney to force compliance.

The Housing Inspector receives his authority from the building inspector who is allowed by ordinance to delegate the necessary authority to his assistants. The city, in response to HUD guidelines, adopted the Minimum Housing Code which recognizes that within the city there exist dwellings that are not fit for human habitation.

The Housing Inspector's procedure for enforcement begins with the receiving of at least five complaints against a structure or his spotting a structure that does not meet standards. After a minimum housing inspection of a dwelling is made and it is found to be substandard, the inspector prepares a complaint and notice of hearing along with a check sheet specifying

the deficiencies. At the hearing, the owner and/or his agent and interested parties present evidence to the housing inspector relating to the dwelling being discussed. After the hearing is held, the inspector makes a decision as to whether the dwelling is dilapidated or deteriorated. If he decides that the structure is deteriorated, he prepares a written report stating his reasons and issues an order for the owner to bring such dwelling into compliance with the code. If the structure is dilapidated, he follows the same procedure and issues an order for the dwelling to be brought up to standards or be demolished. The owner may appeal through the Housing Board of Appeals by filing a notice of appeal with the housing inspector and the Housing Board of Appeals within 10 days from the rendering of the order. The appeal must state the objections of the owner and his grounds for appeal. The Housing Board of Appeals has the final decision unless the owner and/or his agent desires to appeal to the Superior Court of the county by a writ of certiorari.

The Bureau of Inspections and Community Development's inspection policy is greatly influenced by state and federal guidelines. These guidelines place the burden on the City of Washington for finding suitable lodging for anyone who is living in a structure the city wishes to condemn or institute major repairs on. As a direct result of the great expense involved in such an operation and the shortage of adequate housing, the city makes a policy of not starting procedures against any occupied dwelling. Since the adoption of the new Minimum Housing Code in 1972, the city has demolished 68 houses and is in the process of having 19 more destroyed. During the same period, 260 houses were repaired because of the enforcement authority granted in the code.

PUBLIC PARTICIPATION ACTIVITIES

PART III

IDENTIFICATION AND ANALYSIS OF MAJOR LAND USE ISSUES

The City of Washington undertook an intensive citizen involvement program in the spring of 1974. The purpose of this program was to solicit local input in (1) identifying area land use problems and issues, (2) help formulate goals and objectives to address identified issues and problems and (3) to establish an on-going communication process between officials and the public. Over the past year Washington's Citizen Involvement Program has included: a citizen attitude questionnaire, ward meetings, public forums, civil group engagements, and establishment of a citizen "Hot-Line".

Following are results of these efforts. Problems and issues are identified, followed by goals and objectives. These long-range goals are mixed with short- and long-range objectives because area problems are varied. The objectives represent different problem-solving solutions local citizens have proposed. They address their most pressing problems: Growth, Environment, Housing, Public Safety, Streets and Transportation. This plan revolves around these concerns because local citizens have identified them as problems which need solutions. It is their identification of these goals, standards, and objectives which make them important enough to pursue.

GROWTH

The City of Washington has experienced a rapid population decline in the past 15 years, from 9,939 in 1960 to 8,860 (est.) in 1975. An urban fringe has developed lacking municipal services. Additional land is needed for development, particularly for residential areas for low and middle-income families.

GOAL: To Promote Orderly Growth in the Washington Planning Area.

Objective: To annex surrounding residential areas.

Objective: To make provisions to extend municipal services to these areas, such as water and sewer lines, fire and police protection, garbage and trash collection.

Objective: To seek a detailed soils map for the City of Washington and Beaufort County to provide information on soils limitations on development.

LOCAL GOVERNMENT RESPONSIVENESS

The City of Washington has attempted to build a communications process in which the citizen can express his views and opinions of the city's needs and priorities, and the city in turn can communicate progress on these ideas back to the citizens. A responsive local government is essential to a viable democracy.

GOAL: To Maintain Effective Communication Between the Citizens and Elected City Officials.

Objective: To bring about more citizen involvement through the Human Relations Council.

Objective: To establish closer ties with the news media.

Objective: To continue the city's public speaking panel for civic groups, business groups, and the various other citizen involvement groups.

Objective: To continue to publicize the "hotline" telephone number which encourages citizens to give their suggestions on improving living conditions in the city.

ENVIRONMENTAL

Washingtonians strongly feel that plans for development must be balanced with an appreciation of those unspoiled natural areas which contribute to the "livability" of our city. These areas should be respected in our future development.

GOAL: To Discourage Development of Land Which is Unsuitable for Urban Uses.

Objective: To enforce strictly the flood zoning ordinance to insure that new development within the flood zone is either flood-proofed and/or elevated above the flood plain.

Objective: To zone an historic district within the central business district to preserve structures of historic significance and to insure that new development will be aesthetically compatible with existing structures.

Objective: To zone the land adjacent to the Tranter's Creek watershed to prevent damaging changes in water run-off patterns and to prohibit septic tank infiltration of surface water and underground water supplies.

Objective: To zone the marshland on the south side of the river to prohibit any types of use that will change the character of the land.

Objective: To annex areas that are adjacent to the river and that lack sewerage systems to ensure that septic tank infiltration does not downgrade the quality of the Pamlico River.

HOUSING

An aging, deteriorating housing stock is one of Washington's greatest problems, as identified through public meetings, a citizens' survey, and a survey of physical conditions. Standard housing for members of all economic groups is the first requirement for decent living.

GOAL: To Provide an Environment in Which Residents May Have the Opportunity to Secure Adequate and Safe Housing.

Objective: To demolish all dilapidated housing units.

Objective: To upgrade all substandard housing to meet minimum housing codes or else have the structures demolished.

Objective: To create a local rehabilitation loan program with the cooperation of savings and loan institutions and banks, making use of Community Development Revenue Sharing funds.

RECREATION AND PARKS

The 1974 Citizen Survey revealed that 50 percent of respondents never used park and recreation facilities. The non-users were primarily elderly and middle-aged. Also, in a number of public meetings, you pointed out that the city and county do not fully exploit water-based recreational potential.

GOAL: To Provide a Variety of Recreational Opportunities for All Groups.

Objective: To plan for the renovation of the old Armory into a recreation center.

Objective: To demolish Charlotte Street Recreation Center and replace it with the renovated facilities of the old Armory.

Objective: To complete the Jack's Creek park project.

Objective: To provide more "free play" time at recreation centers and to allow activities to develop without structuring them into organizations.

Objective: To make better use of the Pamlico and Tar rivers for recreational purposes by increasing city-owned waterfront property to insure areas for public access, and by providing for additional free city boat ramps and docking facilities.

Objective: To encourage more elderly and middle-aged participation in recreational programs.

Objective: To develop neighborhood play areas within easy walking distance of all Washingtonians.

Objective: To study possibilities of developing a system of bike paths.

Objective: To encourage commercial recreation such as bowling, putt-putt golf, and skating rinks.

Objective: To coordinate city-county activities to eliminate needless duplication of personnel, facilities, and programs.

PUBLIC SAFETY

A high degree of concern in public safety was expressed in the 1974 Citizen Survey. It was felt that additional public safety measures are needed that address dog control, loitering, visual barriers, and increased police car patrol.

GOAL: To Provide the Most Effective and Efficient Means of Public Safety.

Objective: To concentrate patrolling in areas that report the greatest incidence of serious crime.

Objective: To improve street lighting to promote a greater sense of security at night.

Objective: To empower the police to control loitering on public property through enactment of a local ordinance.

Objective: To enact a 24-hour leash law to prevent dogs from running at large.

Objective: To consolidate city-county rescue squad efforts.

Objective: To remove visual barriers from street intersections to lessen the possibility of traffic accidents.

STREETS AND TRANSPORTATION

Washington has numerous unpaved streets and paved streets that lack curb and guttering. Movement of traffic and water run-off patterns will be improved through increased attention to street paving and maintenance programs.

GOAL: To Provide a Highly Functional Internal Street System.

Objective: To pave, curb, and gutter the remaining dirt streets.

Objective: To curb and gutter ribbon streets.

Objective: To allow traffic to flow evenly through synchronization of street lights.

STANDARDS

The development of land within Washington should be undertaken in accordance with sound resource management principles in order to make the most economic use of public funds invested in services and to enhance private investment in the long-term future of Washington. The following standards will guide the location of development in appropriate areas and identify certain measures necessary to insure safety and convenience for residents of and visitors to Washington.

A. General Standards

1) Development should be located on stable, well-drained soils with a relatively low water table.

2) Structures should be located on the development site to avoid the destruction of natural vegetation wherever possible.

3) Structures should be located on site to avoid the alteration of natural land form and drainage where possible.

4) Development should be located to minimize interference with established patterns of surrounding land use and to prevent conflict between incompatible uses of land.

5) Development should be located to avoid the destruction or irretrievable alteration of fragile or valuable natural or cultural resources.

6) Development should not occur in areas where there is a demonstrated danger of the loss of life or property due to natural or man-made processes.

7) Development in areas subject to flooding should be designed and located to minimize the damage caused by such flooding.

8) Development should be located and timed to make the most efficient and economical use of existing or proposed public services including water, sewer, solid waste disposal, public safety, schools, libraries and social services.

B. Residential Standards

1) Permanent neighborhoods should be located in sheltered areas protected from encroachment by major transportation routes and incompatible commercial development.

2) Permanent neighborhoods should maintain low density levels and large amounts of useable open space to preserve privacy and aesthetic appeal.

3) Residential development which requires septic tanks for sewage disposal should follow current health requirements as to soil type, height of water table and area to prevent pollution of ground water supply, aquifer recharge areas or estuarine waters.

4) Development which results in residential densities over 3 families per acre should be served by public or community sewage disposal systems.

C. Commercial Standards

1) General commercial activities and business require locations adjacent to major thoroughfares. The uncontrolled development of commercial sites at scattered locations along highways does not promote good business, is inconvenient for shoppers, promotes inefficient use of valuable developable land, creates dangerous traffic conflicts at each driveway entrance, and seriously impairs the capacity and function of the highway. Therefore, commercial development should be concentrated in groups of complementary uses where possible.

2) Small commercial enterprises of less than one acre are encouraged to locate where suitable sites exist among existing commercial uses in order to take advantage of combined drawing power and to increase customer convenience.

3) Large scale commercial developments involving one acre or more are encouraged to concentrate complementary uses on sites large enough to provide ample parking, controlled access to highways, and suitable buffering for adjacent residential use.

4) Convenience retail facilities designed and limited to serve neighborhood level trade areas only may be appropriate adjacent to some residential neighborhoods if properly buffered to minimize impact on adjacent residences.

5) Water-related commercial activity such as marinas and piers should be located in naturally protected areas as near deep water as possible where the least amount of alteration of vital marsh and estuarine bottom is required.

D. Industrial Standards

1) Industries should be encouraged to locate in the Industrial District in the Planning Area.

2) Industries locating in the Washington Planning Area should be required to provide an assessment of the impact of primary and secondary development caused by industry and should use the best available technology to avoid pollution of the water and air during construction and in production.

IMPACT OF POPULATION AND ECONOMIC TRENDS

An examination of area population characteristics found in Part II of this plan will reveal that the most significant population changes have occurred in the elderly population and the under 5 age group. The 55 and over age group has steadily increased while the under 5 has decreased.

Changes in both age groups are apparently of a national trend reflecting better medical care and health facilities, and no longer a need nor a desire for large families.

What are the implications of these population changes? An increasingly older population will require specialized demands on health care and other community services. A decreasing under-5 population represents possible future under-utilization of school facilities and school personnel. When the under-5 population reaches school age, unless significant in-migration of school age children replenishes the losses which have already occurred, alternatives in anticipated school needs will be required. Personnel shifts and facility re-organization may necessitate efficient school operations.

Economically, an increasing old population represents a larger percentage of residents on a fixed income. This means that persons on fixed incomes will more immediately reflect fluctuations in the national economy.

In the past, agricultural-related activities accounted for most of Washington's economy. However, today, manufacturing, wholesale and retail trade account for Washington's major economic activity. As of 1969, the per capita income of persons living in Washington was $2,168.

The area's economic outlook is encouraging. Several phosphate operations are expected to expand in the county. However, since these plans are not final, the exact impact upon Washington economy cannot be made. Continued economic and industrial development is needed to meet future employment needs.

PROVISION OF ADEQUATE HOUSING

Washington continues to have areas of substandard housing. In 1974 a housing survey was conducted by the city. A total of 2,722 houses were surveyed. Housing conditions were as follows: (a) 55 percent standard, (b) 42 percent substandard and (c) 3 percent dilapidated. The worst housing conditions are found in the western section of the city. This section is mostly populated with black residents.

Today Washington has an average household population of 3.26. As population estimates are realized, overcrowding will increase. It is essential that implementation of the existing housing plan continues. Added housing stock and other housing improvement will remain high among Washington's priorities.

CONSERVATION OF PRODUCTIVE NATURAL RESOURCES

The Pamlico River and its waters are considered the most productive natural resources the Washington Planning Area has to offer area citizens. Washingtonians have varied strong feelings concerning the protection of their natural areas as evident in their environmental goals and objectives.

PROTECTION OF IMPORTANT NATURAL ENVIRONMENTS

Washington citizens seek to encourage wise development of their land and water environment in such a matter that would attract people to the area and not destroy its natural state.

Their objectives "to zone the marshland on the south side of the river to prohibit any types of use that will change the character of the land, and to annex areas that are adjacent to the river and that lack sewerage systems to ensure that septic tank infiltration does not downgrade the quality of the Pamlico River." are some of the ways area residents feel would better conserve and protect their environment.

PROTECTION OF CULTURAL AND HISTORIC RESOURCES

The "Original Washington" has played an important part in the development of Beaufort County and the surrounding areas. The preservation of the old Beaufort County Courthouse and the Bank of Washington is evidence of the city's past cultural contribution to the area. These two buildings are listed on the National Register of Historic Places. Delineation of an historic district is under study, also. These cultural and historic resources are a significant asset to the city and should be protected from unplanned and uncontrolled growth.

ALTERNATIVES CONSIDERED

Citizen participation meetings were held with the intention of encouraging the maximum amount of citizen dialogue on municipal problems, including specific issues concerning land use planning. The principal land use questions raised were the desirable future population growth, the rate of growth, the impact of future growth on community facilities, needed improvements in municipal service delivery, and protection of the environment and of historic sites.

Washingtonians tend to be proud of their historic heritage, their city's relationship to the river, and feel comfortable in a small town environment. These concerns showed up consistently in their remarks. Washingtonians want a small-town setting and are highly concerned about maintaining the river for recreation and fishing uses. Citizens consistently called for protection of their heritage through the creation of an historic zone.

A great deal of effort was devoted to determining needed improvements in municipal service delivery and in community facilities. A great deal of effort was spent in prioritizing "municipal concerns," and Washington's goals are arranged approximately in descending order of frequency that a concern was mentioned. Public libraries, courtesy of city officials, and fire safety were not salient issues to local citizens, and so did not appear in goal statements. Citizen participation in governmental affairs tended to gather little support as a matter of greatest, or second greatest, municipal concern. In this case, however, municipal policy is strongly oriented to city responsiveness and communication with citizens; and so much attention was devoted to developing goal statements on this matter.

DESCRIPTION OF OBJECTIVES, POLICIES, AND STANDARDS PROCESS

The citizen participation process depended on public meetings, a citizen survey, and presentations to civic groups as the three principal methods of encouraging city-citizen dialogue. A conscientious effort was made to record the items brought up at the meetings, and the citizen survey was used as the primary tool in ordering municipal concerns in a priority ranking. Also considered were the priorities of the city's management staff and the City Council, who had been working together in the Community Development Revenue Sharing program to define municipal needs and in setting an annual budget.

The goals, objectives, and standards were compiled and written up by a member of the city's staff who had been involved in the citizen participation process for both CDRS and CAMA. These statements were then circulated to the City Manager, the City Council, and the Planning Board. The Planning Board, in particular, has worked to refine the goal statements.

STATEMENT OF PUBLIC PARTICIPATION METHODS AND RESULTS

Since early spring of 1974, the City of Washington has developed a program to draw citizens into the decision making process: (1) in the preparation of the budget for both fiscal years 1974-75 and for 1975-76, with the Human Relations Council as the "vehicle" for program suggestions; (2) in the preparation of the "hold harmless" and the discretionary applications for Community Development Revenue Sharing; (3) through a series of "Workshops on Local Government" on the structure and function of the local government; (4) through the completion of a random survey of 268 households within the corporate limits of Washington concerning the needs created by urban living; and (5) through meetings with civic groups to explore land use issues in depth.

Although the meetings held on Community Development Revenue Sharing, the annual city budget, and the Coastal Area Management Act have slightly different orientations, they were similar in attempting to involve the citizens in the local governmental process. The citizens' survey was a direct attempt to go to the houses of a randomly selected group of households (10% of all households within the city limits) to gather the responses of an adult member of the household to a series of questions on municipal problems (see: Larry Mazer and Kenneth Andrews, "A Municipality Surveys its Citizens," Popular Government, Volume 41, Number 1 (Summer 1975), 29.)

The workshops on local government were instructional in nature: a member of the city staff would present a brief explanation of his area of responsibility, such as the operation of a division or department of the city. Attendees were encouraged to ask questions to improve their understanding of the city's responsibilities and methods of operation.

Other than the state-provided pamphlets, posters, and public service announcements over radio and television, the city released at least one news

article per month to the local newspaper specifically pertaining to the Coastal Area Management Act. The particular route chosen to encourage public input into the land use planning process was presentations to civic and church groups. The slide shows on CAMA were used to acquaint the group with the basics of land use issues with a discussion afterwards on what relationship Washingtonians desired in the future toward the land and the water.

The city administration has not been entirely satisfied with the level of response to its participation efforts. While a great deal of time and money was spent in publicizing the various meetings, the number of participants was hardly overwhelming at any single meeting. The variety of methods and the large number of meetings gave citizens a great deal of opportunity to voice their views and concerns.

It is difficult to estimate what percentage of the adult population participated in the process; perhaps 20% is the most believable figure. Taking into account that the public participation efforts have been an on-going process for two years, a 20% response is disappointing.

CONSTRAINTS

SECTION IV

LAND POTENTIAL

Physical Limitations

The Washington Planning Area has both man-made and natural hazard areas. Man-made hazard areas consist of tank farms, Warren Airfield, and fertilizer storage facilities while natural hazard areas consist of floodplain lands.

Man-Made Hazard Areas

Tank Farms - There are four tank farms within the city and three within its mile and a half jurisdiction. These storage facilities contain approximately 1 1/4 million gallons of fuel oil.

Of the four within the city, two are located in the east end of town, in industrial zones surrounded by residential usage. The remaining two facilities in the city are in the west end, one in a B-3 zone surrounded by residential uses, the other in a I-2 zone surrounded by commercial, industrial, and some scattered residential usage.

The tank farms within the city limits are all relatively close to residential areas. This unfortunate situation came into being prior to the adoption of the zoning ordinance. From the standpoint of safety, the two tank farms in the east end present the greatest potential of danger, since they are surrounded by predominantly residential land use. Three farms are adjacent to major thoroughfares (Fifth Street, Park Drive). One tank farm is located on Runyon Creek near the point it runs into the Pamlico. The location pattern of the tank farms within the city limits is quite unfortunate due to the proximity to major thoroughfares, residential areas, and the river.

Outside the city limits, one tank farm on River Road is located in an area that is mainly commercial with some residential use to the north. The other tank farms are on a major thoroughfare, Highway 17, in close proximity

to the Pamlico River. The surrounding land is commercial and woodland.

There are certain safety procedures required by law for tank farms, such as retaining walls, check valves, and fire extinguishers. The city should ascertain whether existing law provides adequate protection to the surrounding land uses.

Inside City Limits

1) Greene Oil Company, 423 Hackney Avenue

   a. five tanks
   b. 74,000 gallon capacity
   c. Safety features: 18' long,2' high retaining wall that can hold up to 40,000 gallons

2) H. G. Winfield, 1000 Park Drive

   a. five 15,000 gallon tanks, one 30,000 gallon tank
   b. 105,000 gallon capacity
   c. Safety features: no retaining walls

3) F. Ray Moore Oil Company, 304 New Bern Street

   a. four tanks
   b. 120,000 gallon capacity
   c. Safety features: retaining wall

4) E. P. Rhodes Distributor, 1051 E. 4th Street

   a. six 14,500 gallon tanks, two 20,000 gallon tanks
   b. 127,000 gallon capacity

5) Waters Oil Company, 810 N. Charlotte Street

   a. eleven 16,000 gallon tanks, one 258,000 gallon tank, one 58,000 gallon tank, one 158,000 gallon tank
   b. 640,000 gallon capacity

Outside City Limits

1) Taylor Oil Company, 805 River Road

   a. four 20,000 gallon tanks, one 8,000 gallon tank
   b. 88,000 gallon capacity
   c. Safety features: no retaining wall, security pop-off valve

2) J. H. Pinkham EXXON Products, Highway 17 South

   a. five tanks
   b. 120,000 gallon capacity
   c. Safety features: check valves on tanks

Warren Field

Warren Field is a small airport capable of handling planes up to the size of small jets. The area is classified in I-2 zone with special restrictions to protect flight lanes.

The 1962 thoroughfare plan for the city recommended that Washington Street be extended to Market Street Extension. The 1970 plan, however, recommended that this action not be taken to prevent opening the airport vicinity to urban development. It now appears that with the location of a new N.C. State Armory in the immediate vicinity, in conjunction with an expansion of the airport now underway, urbanizing tendencies are already underway.

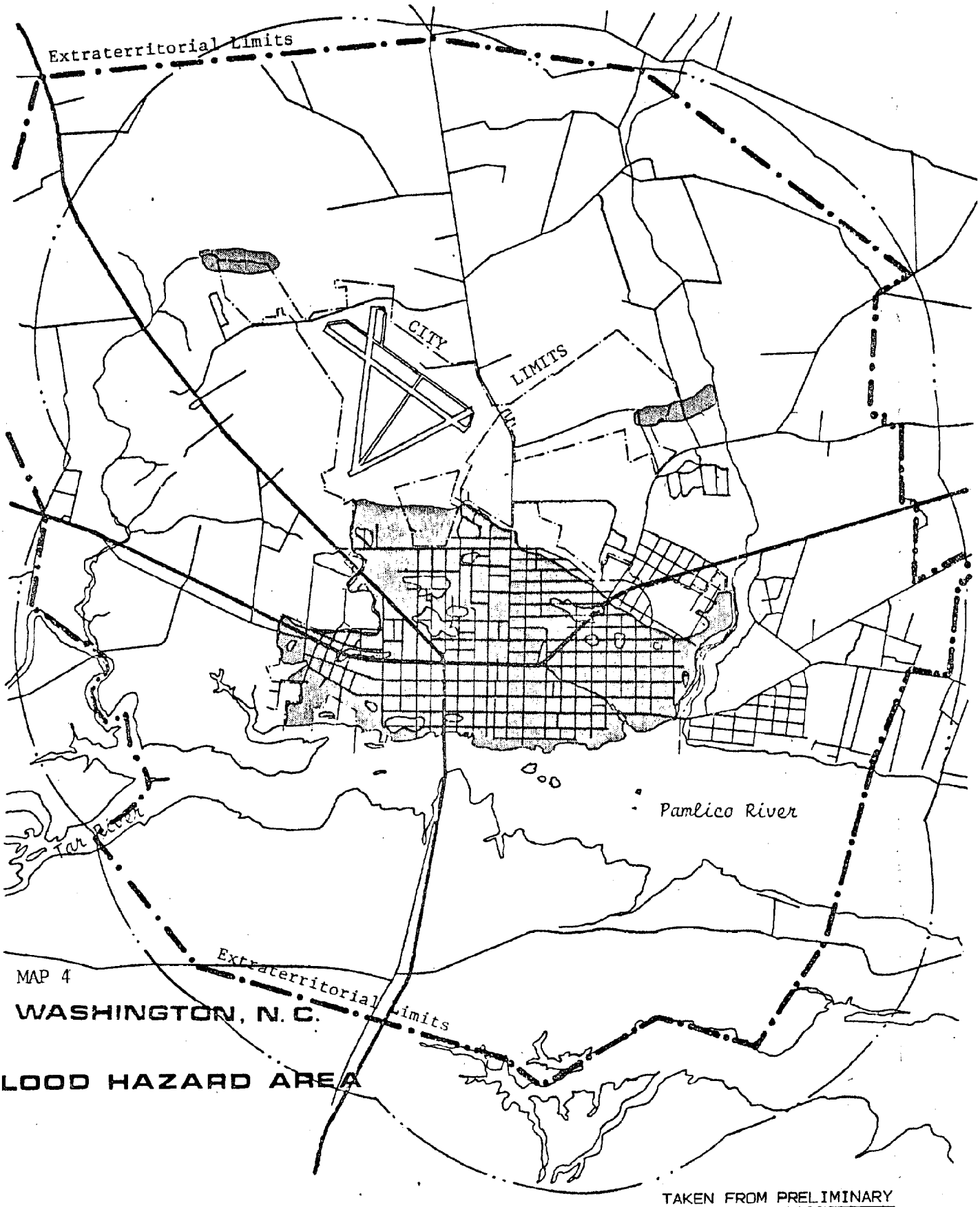
Fertilizer Outlets

Four fertilizer outlets are found in the west end of town, namely Royster Fertilizers, Smith-Douglas Fertilizer, Talley Brothers Warehouse, and W.B. Gerard and Sons.

Smith-Douglas warehouse stores approximately 19 tons of fertilizers and fertilizer materials and 160 tons of farm chemicals. Farms chemicals are pesticides at field strength stored as liquids in containers ranging from one quart to 55 gallons, or as dry material in containers of one to fifty pounds. Any direct contact with these materials could be hazardous. In the event of a fire, toxic fumes would be given off.

Talley Brothers generally stores forty pounds of nitrogen soda, forty of ammonia nitrate, and forty of calcium nitrate. Herbicides and insecticides are not stocked, but are ordered when needed.

The other outlets carry much the same inventory.



MAP 4

WASHINGTON, N.C.

FLOOD HAZARD AREA

TAKEN FROM PRELIMINARY
FLOOD HAZARD BOUNDRY MAP
FOR CITY OF WASHINGTON

NATURAL HAZARD AREAS:

Flood Plain

Washington has been subjected to flooding by hurricane-produced wind tides of sufficient height to cause appreciable damage at least seven times during this century including five times since Hurricane Hazel in 1954. Any type of storm is likely to raise the water level. However, to date, the highest tidal flooding on record was the tropical storm of September 3, 1913, which produced an elevation of ten feet above the normal water level. Based on studies conducted by the Army Corps of Engineers, a severe storm reasonably characteristic of the region could produce a storm tide of fourteen feet above mean sea level if the hurricane moved in an east-west direction along the Pamlico River.

Map 4 depicts Washington's flood hazard areas.

The city, with the help of the state, has tried to take steps to reduce the flood hazard. A combination street and dike has been constructed across Jack's Creek which drains 65% of the town. The dike was designed to protect the area from flood tides up to 6.5 feet in height. Four 13,000 gallon-per-minute pumps operate automatically when the waters behind the dike rise to sea level, and shut off when the water level drops below 1.5 feet below mean sea level.

Floods in the area are caused predominantly by storm tides. Though any type of storm may cause the water level of the Tar-Pamlico to rise, only a tropical storm will cause a sufficient increase for serious flooding to occur. These subtropical storms occur mostly in August, September, and October. The highest recorded tidal flooding occurred in 1913 when a subtropical storm

produced flood waters of 10 feet. The most expensive storm that data are available on was Ione, which in 1956 produced floods of 7.8 feet in elevation and caused $637,000.00 in damages.

The Army Corps of Engineers has determined that the one-hundred-year flood level for Washington is ten feet. Any area which is below this elevation has been designated as a flood zone. Approximately 90% of the city lies in the flood zone.

Washington has a flood zone, floodways, and a coastal high hazard zone. The floodways consist of Runyon Creek, Cherry Run, Lawson's Creek, and Jack's Creek. The designation of "floodway" means that these streams will be required to provide for passage of the base flood without significantly increasing the water surface level above that of the pre-floodway condition.

Coastal high hazard areas are those areas where critical wave action is probable. The boundaries of these areas are set where the effective water depth will no longer sustain a critical wave (a wave three feet or above in height) or where the critical wave will be dissipated by impact with natural or man-made barriers.

General Soil Characteristics

Basic to a study of long-range planning is a knowledge of the types of structure of the soils within the planning area. Soil should be suitable for both construction and septic fields. The inability for a soil to handle septic tank absorption fields can create a severe public health problem. Some communities have severe sanitary problems because lots are too small and the

crowded conditions cause the septic tanks to function improperly. Load bearing capacity must be considered before a new road is planned or before an area is designed for an industrial site. Soils are also considered with regard to suitability for campsites, picnic areas, intensive play areas, general agriculture, woodland, and pastureland. (See Map 5 and Table 13)

Beaufort County lies within the Coastal Plain Soil Province, and the soils are derived from unconsolidated sands and clays of sedimentary origin composed of materials brought down from the Piedmont Plateau and Appalachian Mountain regions and deposited on the sea flood in ancient times. These sediments have been more or less modified by drainage, oxidation, erosion, and the decay of plants, since their elevation is above water. The percolating rain water has carried much of the finer material down from the surface; and this, together with the action of the streams and erosion, has resulted in the subsoils having a generally heavier texture than the surface soils. The red and yellow colors in many of the soils are due largely to the oxidation of the iron-bearing minerals contained in the soil. The dark gray and black colors are the result of the decay of varying quantities of organic matter. The mottling in some of the subsoils is due largely to imperfect drainage conditions, the subsoil being saturated at such frequent intervals that the iron-bearing minerals in the soil have been only partly oxidized. The elevation and drainage in different parts of the county have caused considerable difference in the soils.

SOIL INTERPRETATIONS
GENERAL SOIL MAP
BEAUFORT COUNTY, NORTH CAROLINA

	SOIL ASSOCIATIONS	SEPTIC TANK FILTER FIELDS	LANDFILL (TRENCH)	DWELLINGS W/O BASEMENTS	DWELLINGS W/ BASEMENTS	SMALL COMMERCIAL BUILDINGS	LOCAL ROADS and STREETS	GENERAL AGRICULTURE TOBACCO, PEANUTS AND TRUCK	GENERAL AGRICULTURE CORN, SOYBEANS AND SMALL GRAIN	FORESTRY	PASTURE
1	COMETOE-WANDO-DRAGSTON COMETOE	SLIGHT	SEVERE seepage	MODERATE floods	MODERATE floods	MODERATE floods	SLIGHT	GOOD	FAIR TO POOR	FAIR	GOOD
	WANDO	SLIGHT	SEVERE seepage, sandy	SLIGHT	SLIGHT	SLIGHT	SLIGHT	POOR TO FAIR	POOR	FAIR	FAIR
	DRAGSTON	SEVERE wetness	SEVERE wetness, seepage	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	FAIR TO GOOD	GOOD	FAIR TO GOOD	FAIR
2	LENOIR-CRAVEN-BLADEN LENOIR	SEVERE wetness, percs slowly	SEVERE wetness	SEVERE wetness, too clayey	SEVERE wetness	SEVERE wetness	SEVERE low strength	FAIR TO GOOD	FAIR TO GOOD	GOOD	GOOD
	CRAVEN	SEVERE wetness, percs slowly	SEVERE wetness, too clayey	SEVERE wetness, too clayey	SEVERE wetness	SEVERE wetness, too clayey	SEVERE too clayey	GOOD	GOOD	FAIR	GOOD
	BLADEN	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	POOR	FAIR TO GOOD	GOOD	FAIR
3	BLADEN-BAYBORO-PORTSMOUTH BLADEN	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	POOR	FAIR TO GOOD	GOOD	FAIR
	BAYBORO	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	POOR	GOOD	GOOD	GOOD
	PORTSMOUTH	SEVERE wetness	SEVERE wetness, seepage	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	POOR	GOOD	FAIR TO GOOD	FAIR TO GOOD
4	ALTAVISTA-BERTIE-WICKHAM ALTAVISTA	SEVERE TO MODERATE wetness	SEVERE wetness	MODERATE wetness	SEVERE wetness	SEVERE wetness	SEVERE low strength	GOOD	GOOD	GOOD	GOOD
	BERTIE	SEVERE wetness	SEVERE wetness	MODERATE wetness	SEVERE wetness	MODERATE wetness	MODERATE wetness, low strength	GOOD	GOOD	FAIR TO GOOD	FAIR TO GOOD
	WICKHAM	SLIGHT	SLIGHT	SLIGHT	SLIGHT	SLIGHT	SLIGHT	GOOD	GOOD	GOOD	GOOD
5	LYNCHBURG-RAINS LYNCHBURG	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness, corrosive	MODERATE wetness	GOOD	GOOD	GOOD	GOOD
	RAINS	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods, corrosive	SEVERE wetness, floods	GOOD	GOOD	GOOD	GOOD
6	NORFOLK-WAGRAM-GOLDSBORO NORFOLK	SLIGHT	SLIGHT	SLIGHT	SLIGHT	SLIGHT	SLIGHT	GOOD	GOOD	FAIR TO GOOD	GOOD
	WAGRAM	SLIGHT	SEVERE seepage	SLIGHT	SLIGHT	SLIGHT	SLIGHT	GOOD	FAIR TO GOOD	FAIR	FAIR TO GOOD
	GOLDSBORO	SEVERE TO MODERATE wetness	SEVERE wetness	SLIGHT	MODERATE wetness	MODERATE wetness	SLIGHT	GOOD	GOOD	GOOD	GOOD
7	BELHAVEN-PONZER-WASDA BELHAVEN	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods, organic	SEVERE wetness, floods, organic	SEVERE wetness, floods, organic	SEVERE wetness, floods, organic	POOR	GOOD	POOR TO FAIR	GOOD
	PONZER	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods, low strength	SEVERE wetness, floods, low strength	SEVERE wetness, floods, low strength	SEVERE wetness, floods, low strength	POOR	GOOD	FAIR TO GOOD	GOOD
	WASDA	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	POOR	GOOD	GOOD	GOOD
8	DOROVAN-JOHNSTON DOROVAN	SEVERE wetness, floods, organic	SEVERE wetness, floods, organic	SEVERE wetness, organic, floods, low strength	SEVERE wetness, floods, organic, low strength	SEVERE wetness, floods, low strength, organic	SEVERE wetness, floods, low strength, organic	POOR	POOR	POOR	POOR
	JOHNSTON	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	POOR	POOR TO FAIR	GOOD	FAIR
9	TIDAL MARSH	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	POOR	POOR	POOR	POOR
10	LEON-MURVILLE-SEAGATE LEON	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	POOR TO FAIR	POOR	POOR TO FAIR	POOR TO FAIR
	MURVILLE	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	POOR	POOR	GOOD	POOR
	SEAGATE	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	SEVERE wetness	MODERATE wetness	FAIR TO GOOD	FAIR	FAIR	FAIR
11	JOHNSTON-BIBB JOHNSTON	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	POOR	POOR TO FAIR	GOOD	FAIR
	BIBB	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	SEVERE wetness, floods	POOR	FAIR TO GOOD	GOOD	FAIR

DEFINITIONS OF SOIL LIMITATIONS

NONE TO SLIGHT - Soils have properties favorable for the rated use. Limitations are so minor that they can be easily overcome. Good performance and low maintenance can be expected from these soils.

MODERATE - Soils have properties moderately favorable for the rated use. Limitations can be overcome or modified with planning, design, or special maintenance.

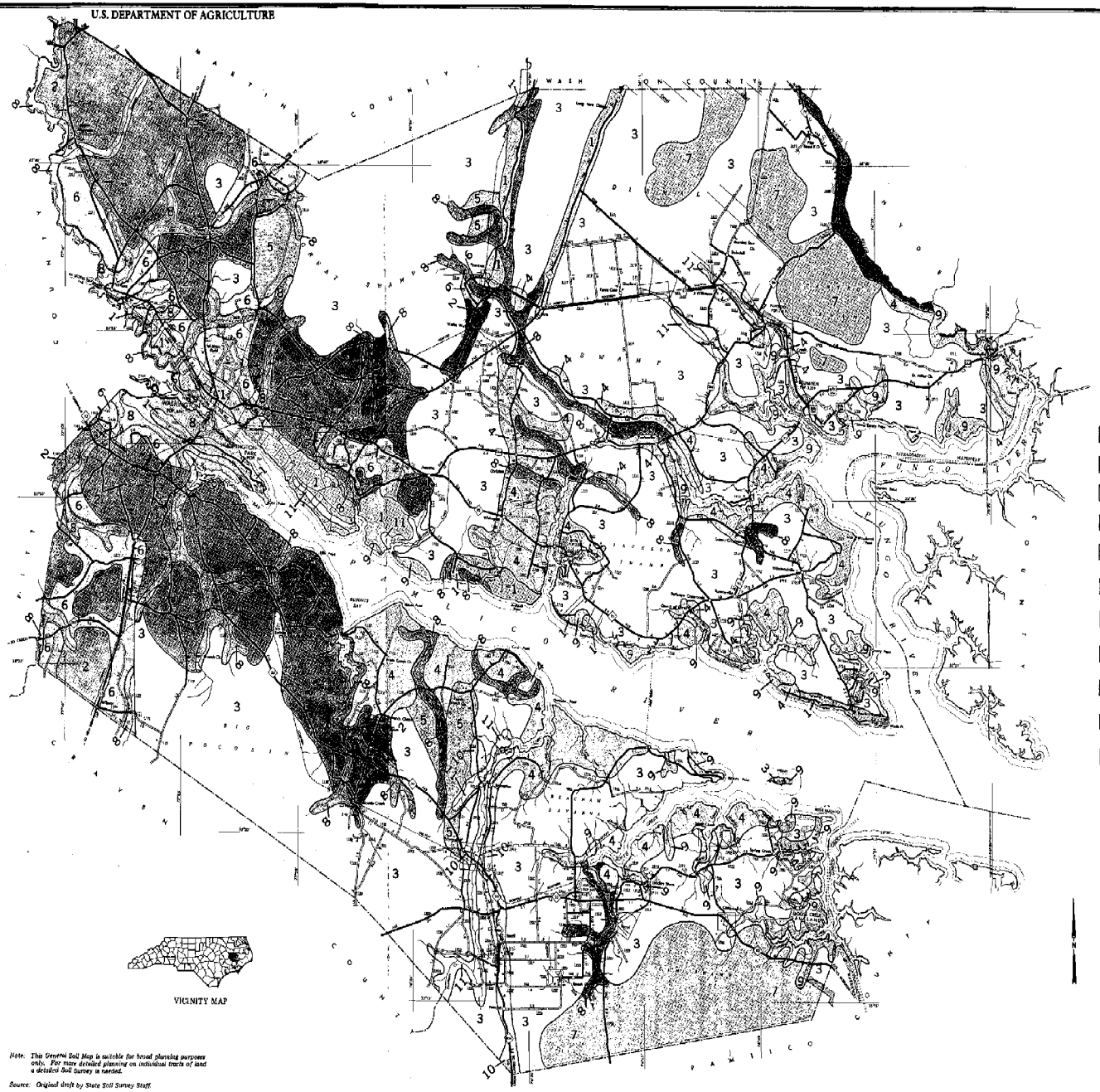
SEVERE - Soils have one or more properties unfavorable for the rated use. Limitations are difficult and costly to modify or overcome requiring major soil reclamation, special design, or intense maintenance.

NOTE: In some instances when adequate mechanical measures have been applied or installed soils rated as "severe" can be upgraded to a "moderate" limitation, i.e., Subsurface drainage applied to Altavista.

4-R-27291-1

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE



LEGEND

1 CONETOE–WANDO–DRAGSTON association: Somewhat poorly drained, friable soils occurring on nearly level to gently sloping stream terraces.

LENOIR–CRAVEN–BLADEN association: Moderately well to poorly drained soils with gray sandy surfaces and firm to very firm clay subsoils.

3 BLADEN–BAYBORO–PORTSMOUTH association: Poorly drained to very poorly drained soils with dark gray to black surfaces and friable to firm subsoils of the lower marine terraces.

4 ALTAVISTA–BERTIE–WICKHAM association: Well drained to somewhat poorly drained, friable soils occurring on nearly level intermediate stream terraces.

5 LYNCHBURG–RAINS association: Somewhat poorly and poorly drained soils with gray sandy surfaces and friable subsoils on broad flat landscapes.

6 NORFOLK–WAGRAM–GOLDSBORO association: Well drained to moderately well drained soils with gray sandy surfaces and deep friable subsoils occurring on nearly level to gently sloping old marine surfaces.

7 BELHAVEN–PONZER–WASDA association: Very poorly drained soils with organic surfaces underlain by friable loamy subsoils occurring on broad, extensive flats or pocosins.

DOROVAN–JOHNSTON association: Very poorly drained soils with deep to shallow organic surfaces over stratified sandy subsurfaces. These soils occur along the major drainage systems and are inundated throughout the year.

9 TIDAL MARSH association: Very poorly drained estuarine soils with organic or mineral surfaces over subsurfaces varying from sands to clay. They are flooded daily by lunar and wind tides.

10 LEON–MURVILLE–SEAGATE association: Somewhat poorly to very poorly drained soils with gray to black sandy surfaces over sandy to loamy subsurfaces. They have weak to strong cemented organic pan layers at depths of 8 to 48 inches.

11 JOHNSTON–BIBB association: Poorly to very poorly drained friable soils occurring in the flood plains of both small and large upland drainage systems.

TENTATIVE – SOIL NAMES SUBJECT TO CHANGE

GENERAL SOIL MAP
BEAUFORT COUNTY
NORTH CAROLINA

0 4 8

APPROXIMATE SCALE - MILES

BASE COMPILED FROM NORTH CAROLINA GENERAL HIGHWAY MAP, POLYCONIC PROJECTION.

GRID TICKS BASED ON NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, EAST ZONE.

VICINITY MAP

Note: This General Soil Map is suitable for broad planning purposes only. For more detailed planning on individual tracts of land a detailed Soil Survey is needed.

Source: Original draft by State Soil Survey Staff

REVISED NOVEMBER 1974 4-B-9786

All of these factors acting upon the original material have produced a number of different soil and varied soil conditions. The soils are grouped broadly into soil series, the soils of each series being similar in origin, color of the surface soil, color and structure of the subsoil, and in topography and drainage. The soil series are divided into soil types on the basis of texture. Seven soil series, including fourteen soil types, are recognized in Beaufort County. Each soil series is named for the major soil series within the association. Five soil series are found within the City of Washington and its extraterritorial jurisdiction, and are as follows:

Lakeland - Chipley: This soil association is excessively to somewhat poorly drained, with sandy soils occurring on nearly level to gently sloping terrain. This association occupies about 5 percent of the county. The areas are long and narrow. They are mainly along the Pamlico River; from Bonnerton south along N.C. Highway 306 to the Pamlico County line; from Acre Station north along N.C. Highway 32 to the Washington County line; and from Pinetown north along State Road 506.

Lakeland soils make up about 45 percent of the association. They are excessively drained sands more than 60 inches thick. The Lakeland soils occur on the higher ridges within the association.

Chipley soils make up about 35 percent of the association. They are somewhat poorly drained sands more than 60 inches thick. The Chipley soils occur on the lower ridges within the association.

The rest of this association is made up of Maxton, Dragston and Osier soils.

About half of this association is cultivated or pastured, and the remainder is forested. The soils in this association are fairly well suited for the production of tobacco, peanuts, corn, soybeans, small grain, and pasture. Below average yields are obtained from corn and soybeans. Coastal Bermuda pasture is fairly well adapted to the Lakeland. However, Ladino clover and Fescue pastures are not as well suited on the Lakeland soils. They are easily tilled and respond well to lime and fertilizer.

The major hazard in this association is two-fold. The Lakeland soils are susceptible to wind erosion, are very low in fertility, and are droughty. The Chipley soils have a wetness hazard.

The major soils in this association have only moderate limitation for septic tank filter fields, foundation footings for large buildings (three stories or less), camp sites, and picnic areas. Nearby water supply may be contaminated in the Lakeland soils. This association is one of the best sources of sand for the building trade.

LYNCHBURG-GOLDSBORO-DUNBAR: This association consists of moderately well drained to somewhat poorly drained soils occurring on nearly level to gently sloping terrain. These soils have a sandy surface and a friable sandy clay loam to a firm sandy clay subsoil. This association occupies about 7 percent

of the County. The area is small and occurs throughout the County. A large area is in the southwest part of the county along N. C. Highway 102, State Roads 1152 and 1154, and south along U. S. Highway 17 to the Craven County line.

Lynchburg soils make up about 35 percent of the association. They are somewhat poorly drained soils having a friable sandy clay loam textured subsoil with its clay content varying from 18 to 35 percent. Color of the subsoil is yellowish brown to brownish yellow, with gray mottlings appearing throughout the subsoil. Permeability is moderate.

Goldsboro soils make up about 25 percent of the association. They are moderately well drained soils having a friable sandy clay loam texture subsoil with its clay content varying from 18 to 35 percent. Color of the subsoil ranges from yellow to yellowish brown, having gray mottlings appearing 20 to 30 inches from the surface. Permeability is moderate.

Dunbar soils make up about 20 percent of the association. They are somewhat poorly drained soils having a firm sandy clay textured subsoil with its clay content varying from 35 to 45 percent. Color of the subsoil varies from brownish yellow to olive yellow, with gray mottlings appearing throughout the subsoil. Permeability is moderately slow.

The rest of the association is made up of minor amounts of Duplin, Dragston, Craven, Lenoir, Coxville, and Rain soils.

Over half of this association is cultivated or pastured, and the remainder is forested. The moderately well drained soils in this association are well adapted to growing tobacco, peanuts, corn, soybeans, and pasture. The somewhat poorly drained soils are not as well adapted to tobacco and peanuts, but are better for the growing of corn, soybeans, small grain, and pasture. Soils in this association are easily tilled and respond well to lime and fertilizer. The major hazard in this association is wetness.

The major soils in this association have a moderate to severe limitation for septic tank absorption fields, and slight to moderate limitation for camp sites, picnic areas, and intensive play areas.

LENOIR-CRAVEN-BLADEN: This association consists of moderately well to poorly drained soils occurring on nearly level to strongly sloping ridges (0-15 percent). These soils have a medium textured surface and a very firm clayey subsoil. The association occupies about 20 percent of the county. Three large areas are located in the county. One area is located in the northwest part of the county; another area is east and northeast of Washington; and the third area starts at the Pitt County line going east along U. S. Highway 264 to Chocowinity and to Cox's Cross Roads.

Lenoir soils make up about 40 percent of the association. They are somewhat poorly drained soils having a yellowish, very firm clayey subsoil with gray mottlings throughout the subsoil. Clay content in the subsoil is more than 45 percent. Permeability is slow.

Craven soils make up 35 percent of the association. They are moderately well drained soils having a yellowish, very firm clayey subsoil with gray mottlings appearing 20 to 30 inches from the surface. Clay content is more than 45 percent. Permeability is slow. The Craven soils occur on the stronger sloping ridges in the association.

Bladen soils make up about 15 percent of the association. They are poorly drained soils having a gray,very firm subsoil. Clay content is more than 45 percent. Permeability is slow. Bladen soils occupy the nearly level or depressed areas in the association.

The rest of the association is made up of minor amounts of Duplin, Dunbar, Coxville, Othello, and Rains soils.

A little over half of this association is cultivated or pasture, and the remainder is forested. The soils in this association are suited for the production of tobacco, peanuts, corn, soybeans, small grain, and pasture. The somewhat poorly drained soils are better suited for the growing of corn, soybeans, small grain, and pasture. The soils in this association are fairly easily tilled and respond well to lime and fertilizer. The major hazard in this association is erosion on the stronger slopes and wetness on the nearly level slopes or depressions.

The major soils in this association have a moderate to severe limitation for septic tank absorption fields, public sewerage system, camp sites, picnic areas, and intensive play areas.

BLADEN-PORTSMOUTH-BAYBORO: This association consists of poorly to very poorly drained soils occuring on nearly level or slight depressions. Surface texture ranges from fine sandy loam to mucky loam. The subsoils range from friable sandy clay loam to very firm clay. This association occupies about 50 percent of the county. There are two large areas located in the county. One is northeast of Washington in the J & W Swamp and eastward and then southwardly to the Pamlico River only to have other small areas of different associations cut it by way of ridges and streams. The other large area is located south of the Pamlico River; east of U. S. Highway 17, eastwardly along the Craven County line to the Pamlico County line; thence northeasterly to Goose Creek.

Bladen soils make up about 30 percent of this association. They are poorly drained soils having a gray very firm clayey subsoil with its clay content more than 45 percent. Permeability is slow.

Portsmouth soils make up about 20 percent of this association. They are poorly drained soils having a black surface and a gray friable sandy clay loam subsoil. Clay content varies from 18 to 35 percent. Permeability is moderate.

Bayboro soils make up about 17 percent of this association. They are very poorly drained soils, having a black surface and a gray very firm clayey subsoil. Clay content is more than 45 percent. Permeability is slow.

The rest of this association is cultivated or pastured; the remainder is forested. The soils in this association are suited for the production of corn, soybeans, small grain, and pasture. They are easily tilled and respond well to lime and to fertilizer. The major hazard in this association is wetness.

The major soils in this association have a severe limitation for septic tank absorption fields, public sewerage system, camp sites, picnic areas, and intensive play areas.

SWAMP-ALLUVIAL-WET: This association consists of poorly drained to very poorly drained soils on nearly level to slight depressions having a surface texture range from loamy sand to loam. Texture of the subsurface layers ranges from loamy sand to clay. This association comprises about 2 percent of the county. It occurs throughout the county in narrow long strips, mostly along the major streams and drainage ways.

Swamp soil makes up about 50 percent of the association. They are poorly to very poorly drained; soil materials are mixed alluvial deposits ranging from loamy sand to clay. They are under water most of the time.

Alluvial land, wet soils make up about 40 percent of the association. They are poorly drained; soil materials are mixed alluvial deposits ranging from loamy sand to clay. They are flooded part of the time. Alluvial land, wet soils are usually located in the smaller drainage ways or between the swamp soils and soils of higher elevation.

The remainder of the association is composed of minor amounts of Bladen, Hyde, Bayboro, Portsmouth, and Marshland soils.

Almost all of this association is forested, mostly hardwood or cypress. Soils in this association are not well suited for cultivation because of the high water table and flooding hazard. They are principally used for wildlife. The major soils in this association have a severe limitation for septic tank absorption fields, public sewerage system, camp sites, picnic areas, and intensive play areas.

Summary

Analytically considering the soils in their natural state in Beaufort County, only the Lakeland-Chipley soil series will give fair support to septic tank absorption fields. This is a meager 5 percent of the county area. The Lynchburg-Goldsboro-Dunbar soils series is poorly suited for septic fields. This soil is but 7 percent of the county area. All other soil series are unfit for septic fields unless proper treatment is applied.

Significantly, only the same 12 percent of the county is recommended by the soil characteristics to be presently suitable for urban and light industrial development. The problem soils of the county can, of course, be intensively developed through major earth work, proper drainage, and pile-supported foundations. A prime example of this renewal of land is the Texas Gulf Sulfur-Lee Creek Mining Complex. The complex was developed on the Lenior-Craven-Bladen soil series and it is, today, the county's most attractive industrial site.

It should also be noted that in a particular soil series are found isolated soil types that can and will support such items as a septic field. A soil always occurs in its customary location such as ridges, slopes, low areas, etc. Therefore, within a particular soil series which, for example, is poorly drained, there will occur a property of the terrain which is unique to that area, such

as a ridge. On a ridge will occur a completely different soil series (characteristics) from the soil series that is surrounding it.[8]

It is recommended that the City of Washington contract with the U. S. Soil Conservation Service for a detailed soil survey, which would provide valuable information, measurements, and interpretations of such significant data as: porosity and percolation rates, drainage, ponding, flooding, run-off, depths to bedrock and water tables, bearing strength, shrinkage, and swelling, corrosion, frost action, erosion, etc. Without such a study, Washington does not have a realistic interpretation of urban land-use suitability. In turn, improper construction and development in the future could occur causing unnecessary costs to the city and the public.[9]

Water Supply Areas

The provision of water and sewer services and facilities serves two functions in the development of an area. They are: (1) meeting needs of existing development; and (2) influencing future growth. Meeting needs of existing development usually receives primary consideration in planning. However, the major importance of water and sewer systems in comprehensive planning is their use as a tool for influencing growth patterns. An examination of existing water and sewer service areas will identify potential growth areas.

The City of Washington supplies water to residents within its city limits and to three industries within the extra-territorial area.

Washington's major water supply comes from Tranter's Creek, which is located

[8]Comprehensive Water and Sewer Study: Beaufort County, W. C. Rodman Land Surveying and Civil Engineering (1971), pp. 51-61.

[9]Washington Park and Recreation Study, N. C. State Department of Conservation and Development, Division of Community Planning (Feb. 1967), p. 29.

six miles northwest of the city. The secondary source of water is at Clark's Neck. Since most of the watershed lies beyond the city's planning area, county-city cooperation is imperative. Caution should be taken by preventing high density residential growth and septic tank uses in these areas. Map 6 shows Washington's major water supply areas.

Steep Slopes

The Washington Planning Area does not have slopes that exceed twelve percent.

FRAGILE AREAS

Inappropriate or poorly planned development can easily damage or destroy fragile environmental areas. These areas are as follows:

Coastal Wetlands

Washington's coastal wetlands lie across the Pamlico River in the southern portion of the extraterritorial area. This area is essentially undeveloped and should remain so.

Outer Banks Sand Dunes

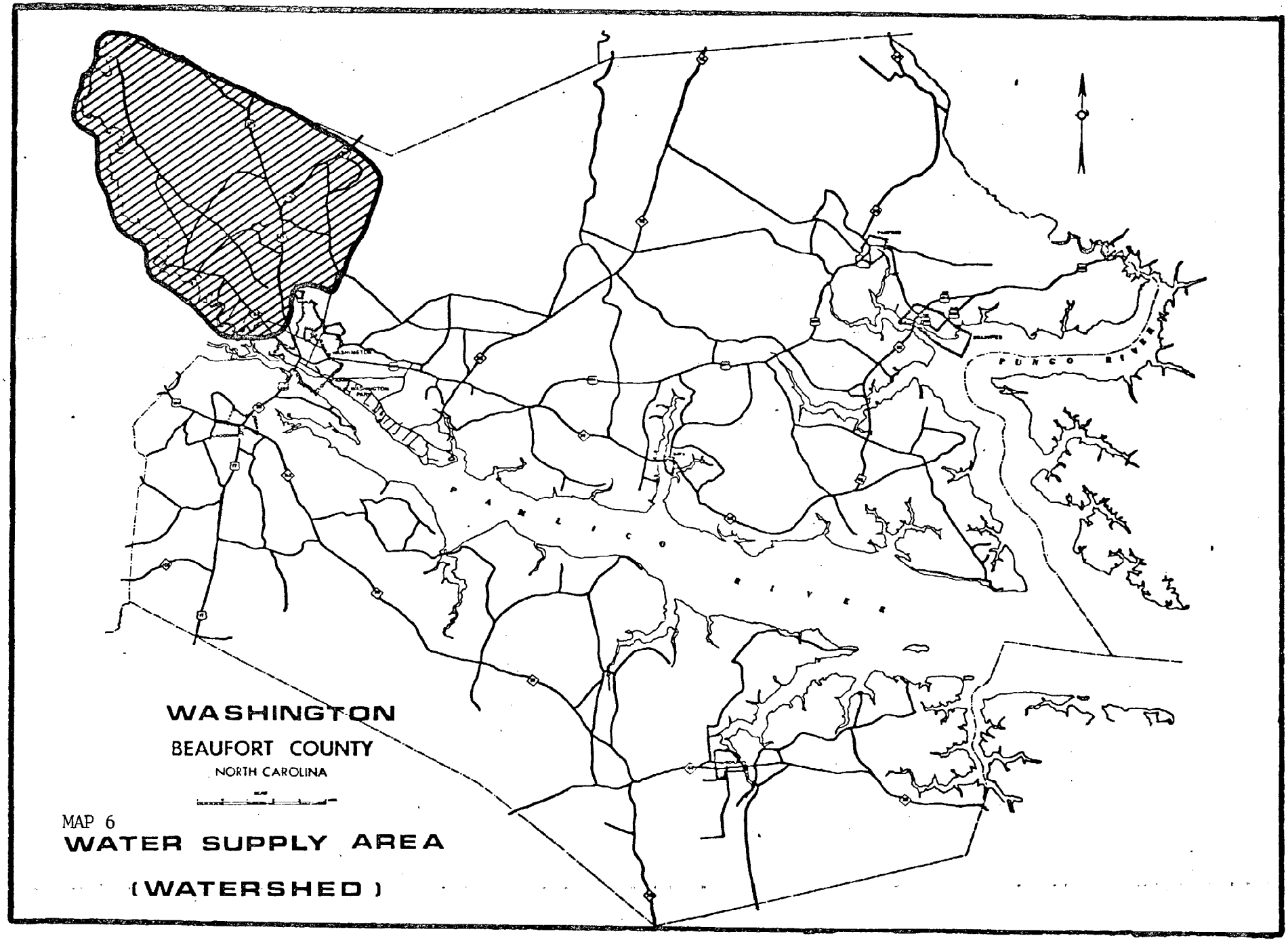
Not applicable in the Washington Planning Area.

Ocean Beaches and Shorelines

Not applicable in the Washington Planning Area.

Estuarine Waters

The part of the Pamlico River that flows within Washington's mile and a half planning jurisdiction is considered an estuary. These estuary waters can be protected by controlling development along the Public Trust Waters of the Pamlico.



MAP 6
WATER SUPPLY AREA

(WATERSHED)

Public Trust Waters

The Pamlico and Tar rivers,which flow through the southern portion of the Washington Planning Area,are identified as public trust waters. These waters are also classified as "Class C"and'Class SC" waters according to the N. C. Stream Classification System.

Map 7 depicts these classes. "Class C" water uses are limited. For example, these waters may be used for fishing, boating, etc. However, "Class C" waters are not to be used as a source of water supply for drinking, culinary or food-processing purposes. These waters are suitable for fish and wildlife propagation. Similarly, "Class SC" waters are suitable for fishing and other usages except bathing or shellfishing for market purposes. These waters are also suitable for fishing and fish propagation.

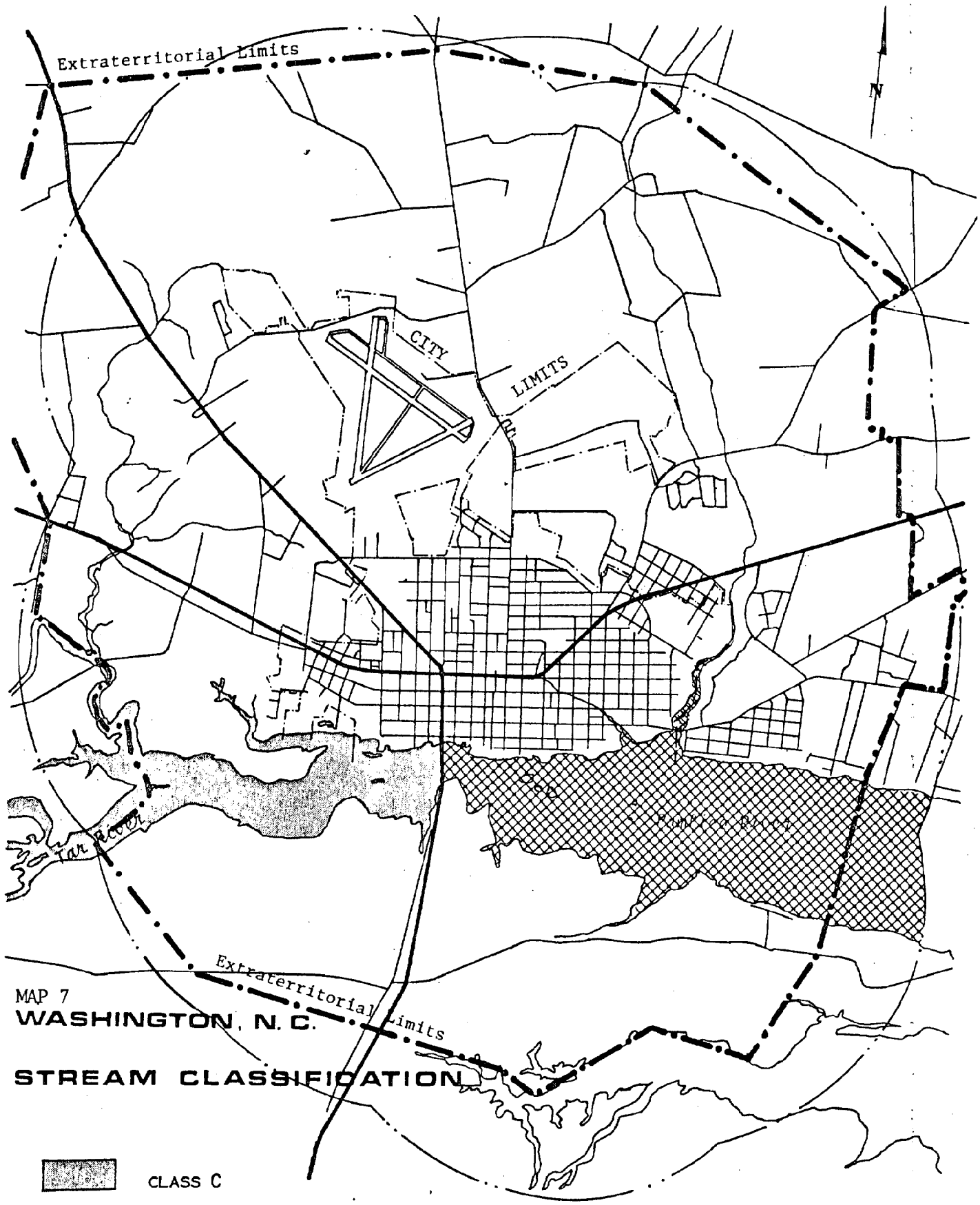
Quality standards applicable to Class C and Class SC waters are found in the Appendix.

Complex Natural Areas

The Coastal Resources Commission may determine that there are complex natural areas within the Washington Planning Area. Complex natural areas are defined as lands that support native plant and animal communities and provide habitat conditions or characteristics that have remained essentially unchanged by human activity. Washington's extraterritorial jurisdiction south of the river adjacent to the river may possibly meet the requirements of complex natural area. If so, this area should remain essentially in the same state it is today.

Areas Sustaining Remnant Species

No areas sustaining remnant species have been identified in the Study Area.



MAP 7

WASHINGTON, N. C.

STREAM CLASSIFICATION

CLASS C

CLASS SC

Areas Containing Unique Geologic Formations

Areas containing unique geological formations have not been identified in the Study Area.

Registered Natural Landmarks

There are no registered natural landmarks located in the Washington Planning Area.

Archeologic and Historic Sites

Washington has 2 properties listed on the National Register of Historic Places: the Bank of Washington and the old Beaufort County Courthouse. In addition, the Division of Archives and History, N. C. State Department of Cultural Resources, has put in motion a survey of historic property and has tentatively delineated a historic district which is approximately equivalent to the downtown section of the city. In order to keep maximum control of the composition of this area in local hands, the city will propose to create an historic zone. Any new development within the downtown area will be required to conform to the "nature" of the existing structures.

AREAS WITH RESOURCE POTENTIAL

Productive Agricultural Lands

Lands devoted to agricultural purposes are primarily in Washington's extraterritorial area. These lands will be encroached upon by future development. Urban development should be directed to sites other than these productive agricultural lands.

Mineral Sites

There are no known mineral deposits in the Washington Planning Area.

Publicly-Owned Lands and Other Non-Intensive Outdoor Recreation Lands

Washington's parks and recreation areas comprise approximately 50 acres. The Recreation Department administers recreational activities at the following sites:

1. Seventh Street Park
2. Charlotte Street Center
3. Kugler Field
4. Todd Maxwell Field
5. Stewart Park
6. Oakdale Park
7. Washington Docking Facilities
8. Jack's Creek
9. Bridge Street Center
10. Beebe Park
11. Carver's Landing
12. Haven's Garden
13. Water Tank Property Area

Privately Owned Wildlife Sanctuaries

There are no privately owned wildlife sanctuaries in the Washington Planning Area.

CAPACITY OF COMMUNITY FACILITIES

Existing water and sewer service areas are shown on Map 8.

Water and Sewer Service

The City of Washington operates a water and sewage treatment plant under the Department of Public Works.

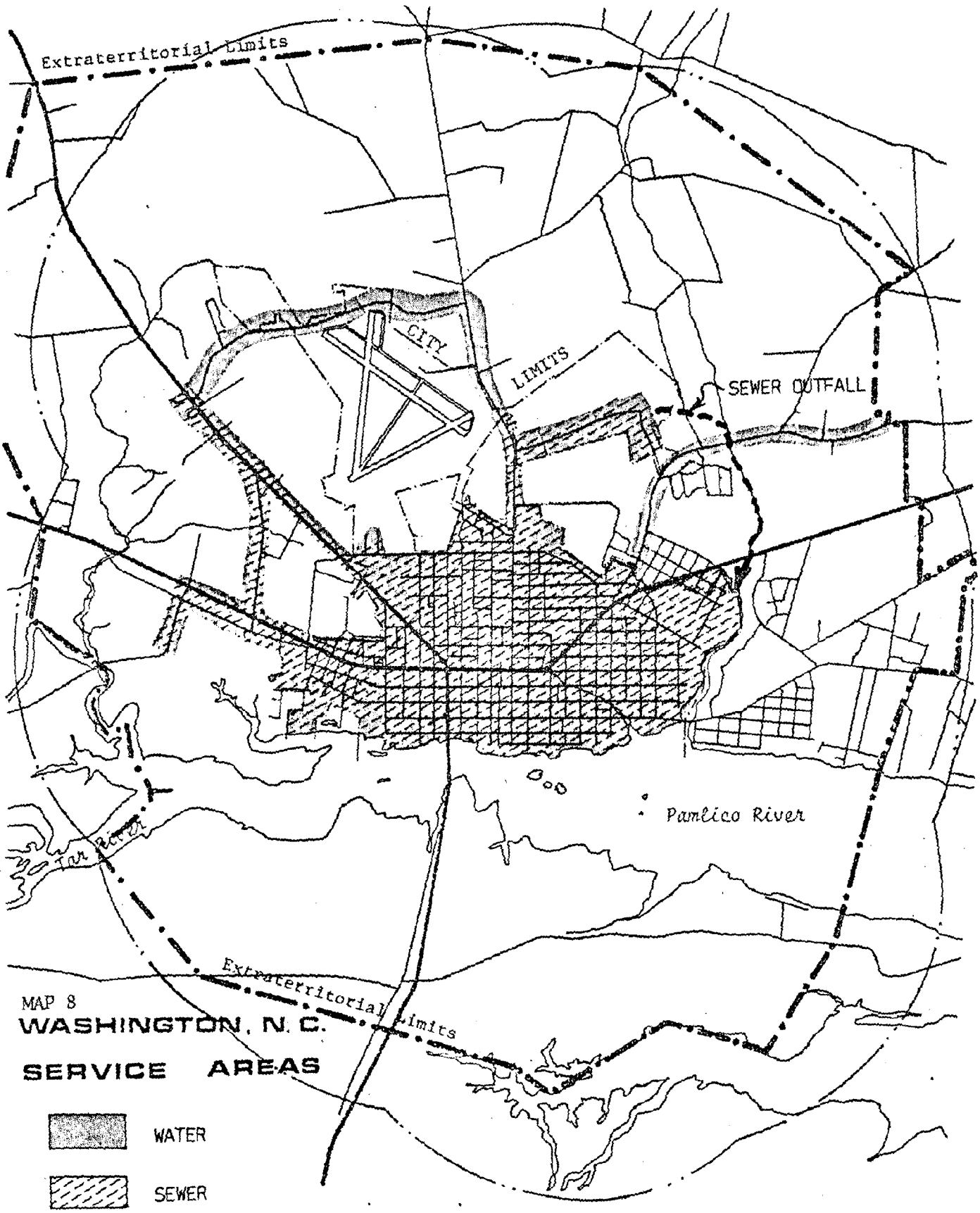
The major water supply comes from Tranter's Creek. This creek is located six miles northwest of the city. At this point, the creek has a minimum daily flow of eight million gallons per day. The substation has two pumps: one 1600 gpm, and one 1900 gpm. This assures that maximum capacity of the cast iron pipe line to the substation can be utilized during peak periods or whenever necessary (2100 gmp at 100 lbs; pressure is peak capacity).

The secondary source of water is at Clark's Neck, where the city has a 1600 gpm pump. This water is not always useable, however, due to the high salt content of the water.

The water plant was constructed in 1955 and has a capacity of 2.2 million gallons per day. The average daily demand on the plant is only 1.3 mgd which allows a safety margin of approximately 25%.

The water is pumped from the reservoir by two electric pumps; one is a 1000 gpm pump and the other is a 2000 gpm pump. The water flows through a 12" main to a distributing system and elevated tank simultaneously. The elevated tank has a capacity of 300,000 gallons and was built in 1939.

An additional 500,000-gallon elevated tank and a 500-gallon-per-minute well was constructed in 1975 at Slatestone Hills. There will be a small water treatment plant there also,having a 500-gallon-per-minute capacity which will serve primarily to remove the iron content of the water. This new construction will give the city more down time to allow for needed maintenance at the other plant.



MAP 8

WASHINGTON, N. C.

SERVICE AREAS

WATER

SEWER

BOTH

The city's plant employs complete primary and secondary treatment of sewage. Approximately 95% of the area within the city limits is presently served by the system. The sludge from the sewer is pumped into drying basins where it decomposes into lumps and is available for use as fertilizer. The plant itself was constructed in 1959 and the daily flow is approximately 1.1 to 1.3 million gallons. The plant is designed to process 2.2 mgd as a secondary treatment plant. At present, the plant's B. O. D. level is around 79%. Although there is no service to residents outside the city limits, service has been extended to three industries. The city bills these industries for the service at the rate of 75% of the water bill.

Normally a system uses gravity for flow; but in Washington, the basically flat topography requires that sewage be collected at several points and be pumped to the treatment plant.

Table 14 shows water and sewer plants capacity figures and percent utilized.

TABLE 14 WATER AND SEWER PLANTS

	Date Constructed	Capacity Operating Level	% of Capacity
Water Plant	1955	1.3 mgd	75%
Sewer Plant	1959	1.1-1.3 mgd	75%

There is a total of 55 miles of water lines ranging in size from 2" to 16". The 2" lines are totally inadequate and are in the process of being replaced with 8" asbestos cement pipe. Virtually 100 percent of water usage is metered.

In summary, the present water and sewer waste treatment facilities need upgrading in order to provide adequate service for future development and the ten-year (1985) projected population growth. Plans are underway for these

improvements. A 201 Facilities Study which is being coordinated by the City of Washington will determine the most feasible methods of water and sewer waste treatment.

Transportation (Primary Roads)

The provision and maintenance of an adequate and efficient transportation system will be of extreme importance to the future development of the Study Area-- a transportation system consisting of not only highways and streets, but bus, rail, air, etc. as portions of the system.

Three major highways run through the Washington Planning Area. They are: U.S. 17, U.S. 264, and Highway 33. U.S. 17 is part of the North Carolina truck highway system which has the function of moving large volumes of inter-state traffic through local traffic. U.S. 264 is part of the truck feeder system which carries moderate to high volumes of traffic over shorter distances. N.C. 33 is part of the state rural collector system which carries mainly local traffic.

Table 15 gives the design capacity and percent utilization of primary roads in the Study Area.

Primary Roads

The design capacity and percent of usage figures were developed from data supplied by the N. C. Department of Transportation. The design capacity data was derived from charts provided by Mr. T. L. Waters, Manager of Planning and Research, Department of Transportation, Raleigh.

Design capacity is based on land width, location, and the state average for that type of road. The actual usage figures were compiled from traffic counts furnished by the District Engineer of the Department of Transportation for the Washington area. These figures are shown in Table 15.

TABLE 15 PRIMARY ROADS

Washington Planning Area

Roads	Width	Capacity	Use	%
Bridge (bet. River and 5th)	57	25,000	13,500	54%
Carolina	44	15,500	9,500	61%
Third	44	-	-	-
Hackney (5th & 17)	18	3,500	-	-
15th (Market-17)	48	18,000	6,200	34%
15th (Market-264)	44	15,500	-	-
NC 33 (Hackney to Whispering Pines Rd.)	52	18,000	9,000	50%
NC 33 (Whispering Pines to Mr Ed's)	68	18,000	6,800	37%
Market (3rd-5th)				
Market (5th-15th)	34	8,340	5,600	67%
5th-Pennsylvania	40	14,100	9,800	69%
Highland Drive	48	8,340	3,500	41%

SOURCE: N. C. Department of Transportation

Other portions of the Washington transportation network include rail, trucking, bus, and air service.

Railroad service for the City of Washington is provided by the Seaboard Coastline. From their terminal in Washington, Seaboard can connect with other railroads servicing all areas of the United States and Canada.

At the present time Washington handles both incoming and outgoing traffic of about 150-200 cars per month. There is a daily (except Sunday) run of one freight train. Washington has no passenger service.

Washington is served by two trucking lines; Barnes Truck Lines and Estes Express Lines, Incorporated. Barnes Truck Lines has its home base in Wilson, N.C.,and serves all eastern North Carolina. Estes Express Lines is a Richmond, Virginia, based firm and services all of Virginia, North Carolina, and northern South Carolina.

Washington is served by Seashore Transportation Company and Carolina Trailways Bus systems. Seashore is a local company based in New Bern with its primary function being to serve the marine installations at Camp Lejeune and Cherry Point. They also have direct connections at Jacksonville, Raleigh, and Rocky Mount to Trailways and Greyhound.

The Carolina Trailways Bus Service is a Raleigh, North Carolina,based company which is associated with Trailways and has nationwide service.

A charter bus service is also available at the Washington Bus Station.

Warren Field is operated by the Airport Commission whose seven members are appointed jointly by the City of Washington and Beaufort County. The air field was built by the United States Government during World War II, and subsequently turned over to the city and county governments.

The air field has 3 runways. Two are 5,000 feet long and thus suitable for small jets. One runway is lighted. There is a radio beacon installed in 1971 that transmits on a low frequency of 288 megahertz. There is no tower, but pilots can contact the airport office for informal advice on local weather conditions. There are 6 closed T hangars and 5 open T hangars. Charter planes and crop dusting units are based at the air field.

The air field averages about 40 landings a day. The heaviest users are local industries that have planes based there, such as National Spinning, Hackney, and Green Oil Company. Hamilton Beach, Dixie Yarn, Texas Gulf, Bethelehem Steel, American Cynamid, and Weyerhaeuser use the field but

do not have planes based there.

Washington does not have public transportation plans. Public transportation is one of the most costly services local government can provide. Although a public transportation need may exist, the existing population may not be able to support a municipal transportation service. In summary, implementation of local transportation plans will require the City Council and other governing bodies within Washington to work closely with the N. C. State Department of Transportation, and with Washington and Beaufort County planning boards. Only through such coordination will safe, adequate, and efficient transportation systems be afforded the citizens, businesses, and industries within the area.

Schools

Total enrollment figures demonstrate the strain placed on the design capacity of the existing schools:

1974-75 School Year

	Design Capacity	Enrollment	% of Use
Eastern Elementary	936	759	98.1
John Cotton Tayloe Elementary	559	557	99.6
John Small Elementary	650	641	98.6
P. S. Jones Junior High	1,050	1,038	98.9
Washington High	1,072	843	78.6

Obviously, four out of five schools are operating at capacity, although average daily membership would fall below total enrollment and would, therefore, lessen the daily enrollment burden.

In addition to the public system there is a private school, Pamlico Community School, with an approximate enrollment of 275, which has grades K through 12. *

NOTE:

* Pamlico Community School discontinued operation at end of 1977 school year.

City Hall

The present facility now being utilized as City Hall is a two-story structure located on Market Street halfway between Main and Second Streets. The building was originally constructed circa 1884 as a fire station but has been renovated for use as a City Hall. Additional office space for city administration is provided in the "old county jail house" adjacent to present city hall facility.

Police Protection

Residents are provided police protection by the Washington City Police within city limits and the Beaufort County Sheriff's Department in the extra-territorial area. The Law Enforcement Center is located at Third and Respess Streets.

Washington's Police Department has the following breakdown of personnel allocations for fiscal year 1975-76: one (1) Chief Police, two (2) Captains, five (5) Sergeants, one (1) Sergeant-Detective, thirteen (13) Patrolmen, and one (1) Records Clerk-Dispatcher. A part-time patrolman enforces parking regulations.

Fire and Rescue

The Washington Fire Department is manned by 19 full time firemen, 7 call company firemen who are compensated on a monthly basis for their part-time service, and 30 volunteer firemen. The volunteers are divided into two pumper companies and one ladder company, each having a Captain and an Assistant Captain.

The volunteer firemen are provided with 40 to 50 hours of training per year in fire fighting techniques. The full-time firemen train three hours per week and also train with the volunteers.

The department has a modern communication system which is linked with other fire departments throughout the county. The department's internal

communication system has 16 paging units which the firemen and call company personnel carry attached to their belts, allowing the men to be called back to the station anytime by signal; 20 phone-alerting systems link volunteer to station, as do 2-way radios on all trucks.

Records are kept of the condition of the equipment, fire hoses, and fire hydrants. All hose and every hydrant is tested every year, the hydrants for water pressure.

The service area of the fire department includes the City of Washington and neighboring residential development outside the city limits for which Beaufort County has supplied a truck with a three-minute water capacity and a payment to allow the city to hire 2 firemen to man it. The ability to suppress fires in the county, which lacks a water system, is virtually impossible from point of view of a three-minute water supply.

Fire protection is offered by contract, renewable annually, to county industrial and commercial establishments. The City of Washington Park contracts its fire service needs with the City of Washington at a nominal fee yet obtains fire service protection equivalent to that received by the residents of Washington.

The city has a mutual aid agreement with surrounding communities to render aid in case of a large fire.

The rescue squad is composed of those firemen, call company personnel, volunteers, and hospital staff who have completed the 81 hour Emergency Medical Technician course, as required by state law. As of summer of 1974, 35 men had received this training and passed the necessary exam. The training requirements have placed a considerable burden on the time of those taking the E.M.T. course. None received any compensation for the 81 hours. A fall-off in "volunteerism" in the community has placed an increasing burden on full-time personnel for

both fire and rescue service. The financial burden of continuing "adequate" fire and rescue services is considerable. Fortunately the County government seems willing to cooperate in sharing these costs. Greater coordination of hospitals in the county and their ambulance services with the same service provided by the various cities is a matter of crucial concern for effective service and efficient use of public expenditures.

Medical Facilities

Washington's medical needs are served by the Beaufort County Hospital. This hospital, which was opened in May of 1958, has a staff of 24 physicians, 41 registered nurses, 78 licensed practical nurses with 104 beds (only 150 are in use) and 15 bassinets. Beaufort County Hospital, like other similiar institutions throughout the state, receives contributions from the Duke Endowment Fund which is based on a formula taking into consideration the number of medicaid patients and bad debt losses. This figure amounts to 75¢ per day for welfare and nonpaying patients. The hospital operates an ambulance service for which it receives a contribution from the county to underwrite loss. Other than these two contributions, the hospital has been self supporting since 1959.

In addition to its major function of caring for the sick, the hospital operates its own two-year training school for X-Ray technologists with two students per year. The hospital serves as a practical training center for the School of Nursing and School of Laboratory Assistance of Beaufort County Technical Institute, as well as its association with medical training facilities at East Carolina University.

Libraries

There are three libraries which serve the Washington Planning Area: (1) The Brown Library, (2) The Beaufort-Hyde-Martin Regional Library and (3) The I. B. Turner Library. The I. B. Turner Library is under the general supervision of the Beaufort-Hyde-Martin Regional Library and is a part of that system while the Brown Library is for the city residents and is not affiliated with the regional library system.

Brown Library

The Brown Library is the main library for the City of Washington and is located on Van Norden Street between Main and Second Streets. The library was constructed in 1953 from funds provided by the estate of George H. and Laura E. Brown. The estate continues to contribute annually to its operation. The library operates by receiving funds from the Brown Estate, the city, Beaufort County, gifts from private individuals, and overdue book fines.

In addition to the customary book service, the library has a large meeting room, a career room for the high school students, an interlibrary loan service, and a movie projector and projection room.

Beaufort-Hyde-Martin Regional Library

The Beaufort-Hyde-Martin Regional Library primarily serves the rural residents of the counties included in its name. Due to the regional nature of the system, it is hard to evaluate its effects on Washington residents. The main library of this system is presently located in the old Beaufort County Courthouse. The library, which serves as base of operation for twelve branch libraries, is stocked with 51,000 volumes, 1500 records, and 350 pieces of art. The primary function of the main library is the operation of bookmobiles and administration of the tri-county system.

The I.B. Turner Library, located on W. Ninth Street, was once called the I.B. Turner Library for Negroes. It is now a branch of the Beaufort-Hyde-Martin Regional Library and is used extensively by local residents. The City of Washington contributes approximately 50% of its yearly budget. The library is mainly geared to kindergarten through grade school students. There are story hours, charts, records, and pictures that help introduce students to learning resources of the library.

Recreational Facilities

The City of Washington has three main recreational buildings: Seventh Street Recreation Center, Bridge Street Recreation Center, and Charlotte Street Recreation Center. In addition, there is a small building adjoining Oakdale Cemetery which is used for arts and crafts classes.

Charlotte Street was constructed in 1934 and has received nominal repair and maintenance since then; the building is structurally unsound and should be demolished. Charlotte Street property adjoins the current N.C. National Guard Armory, which the city and county will acquire jointly once the new Armory has been completed. Extensive renovation may be necessary for conversion of the facility to recreational uses.

Seventh Street Recreation Center, completed in 1972, is in the vicinity of Washington High School and so is conveniently located for students after school hours. Seventh Street Recreation Center houses the administration of the Parks and Recreation Department.

Bridge Street Recreation Center was completed in 1962 and is found in the predominantly black section of town.

The city has approximately 50 acres of parks, which is inadequate according to NRPA standard; approximately twice this acreage is needed for a city of Washington's size.

According to the City Recreation Director, Washington's existing recreation plan is currently being implemented. The plan identifies potential land to be used for recreational purposes and presents proposals for open space and recreation areas which are substantiated by a more in-depth study than can be entertained in this plan. In November, 1969, a $225,000 recreation bond issue was passed by the voters of Washington. As a result of the bond's passage, the city will be provided with a new gym at Bridge Street, renovation of all present recreation areas, and a new central recreation facility. These were all recommendations of the Park and Recreation Study. All indications are that the city will continue to follow the recommendations of this study during the planning period.

It is further recommended that the city obtain control of that area of land south of the Pamlico River directly across from the downtown waterfront area for open space and recreational purposes. This same area has been identified as a potential regional park development. This area would provide an ideal location for a municipal marina, for instance, and relieve the congestion at the present municipal boat launching area on Runyon's Creek. Not only would the city and its citizens benefit from a large recreational area in the city's backyard, but the aesthetic value of the river would be maintained and would complement the aesthetic value of the city after completion of the downtown waterfront urban renewal project.

The proposed park and recreational development along Jack's Creek is in progress at this time. This development will tie into and complement the proposed new central recreational facility to be located between Fifth and Seventh Street along Jack's Creek.

Sanitation

The Sanitation Division of the Public Works Department is responsible for residential garbage collection, trash and limb collection, commercial refuse through the dumpster container system, and the street sweeper.

This division consists of two residential garbage trucks which collect garbage behind the resident's house twice a week.

There are also two trash and limb trucks working the same schedule as the garbage trucks. These men only collect refuse that has been placed near the street.

The front end loader, Dumpmaster type truck, is operated by one employee working mostly at night with little supervision. There are a total of 217 dumpster containers throughout the city which this truck empties twice a week, with the exception of those of schools and the hospital which are emptied three times a week. The city has just recently purchased a new 31 cu. yd. Dumpmaster truck.

The dumpster containers are available in four, six, and eight cubic yard capacities. Businesses that do not generate enough refuse to justify the use of a four cubic yard container may share with another business. A business may purchase containers from the city or rent.

All trash and garbage is dumped at the Beaufort County Landfill which started its operation in February, 1974. Prior to this, the city operated a landfill of its own.

The city must comply with state regulations concerning the covering of the old dump during fiscal year 1975-76. This will require a major expenditure for dirt, hauling it to the dump site, spreading it to a depth of 6", and planting a grass cover. The dump is leased and will one day revert back to its original owners. Decomposing organic matter yields methane gas which would seep to the

surface through the ground cover and form potentially dangerous underground gas pockets. The future land use of such a site will be quite limited. The most appropriate use will be open space with few or no buildings.

Storm Drainage

Providing an adequate storm drainage system in Washington is made difficult by the fact that the topography is very flat with few natural drainage outlets. In order to compensate for this lack of elevation, Jack's Creek, the major outlet, has been dammed and its water level maintained at approximately one foot below sea level. When the water in the creek rises above this level, four 13,000 gallons-per-minute pumps operate automatically to pump the excess water into the Pamlico River. If the elevation of the Pamlico River becomes lower than the elevation of Jack's Creek, water will flow by gravity into the river through flood gates. This system is capable of handling a 2-inch-per-hour rainfall.

Approximately 75 percent of the town's area is drained by waterways feeding into Jack's Creek. The remainder of the city drains into Kennedy's Creek, Runyon's Creek or directly into the Tar and Pamlico rivers. Waterways consist mainly of open ditches with some storm sewer pipes carying water beneath the streets.

Telephone and Telegraph

Telephone service in Beaufort County is provided by the Carolina Telephone and Telegraph Company and the Tri-County Telephone Membership Corporation. The Carolina Telephone and Telegraph Company maintains exchanges in Aurora, Bath, Belhaven and Washington. The Tri-County Telephone Membership Corporation has exchanges at Pike Road, Pinetown, and Sidney Cross Roads. Direct distant dialing is in use throughout the county. Carolina Telephone and Telegraph services provide 11,601 telephones, while Tri-County Telephone Membership Company serves 900 telephones in Beaufort County.

Western Union provides telegraph service in Washington and Belhaven.

Electricity

The City of Washington owns and operates the electrical distribution system for the city and a sizable area of its environs. The system is regional in scope in that its power lines extend along major highways in some areas for twenty-five (25) miles. The system serves communities as distant as Pinetown, Terra Ceia, Bath, Bayview--on the east end, and Latham on the west end.

The system is under the supervision of the Director of Electric Utilities who is responsible to the City Manager. Electric Utilities is comprised of a Distribution Department with two (2) line crews, one (1) underground service crew, and a right-of-way crew, and, lastly, a meter department. Electric Utilities employs thirty four (34) men on a full-time basis.

The city purchases 12.5 KV and 34.5 KV power from Virginia Electric and Power Company. The 12.5 KV energy is utilized at the delivery point. The 34.5 KV energy is transmitted across town and is converted to 12.5 KV power for distribution.

The maximum capacity of the present bank of VEPCO transformers is 25,000 KVA for the 12.5 KV energy, and 20,000 KVA for the 34.5 KV energy. The combined capacity is 45,000 KVA for the entire system, excluding National Spinning. National Spinning is being served on a separate 40,000 KVA transformer along with Belhaven.

The system reached a historic peak demand of 37,907 kilowatts with a monthly average of 32,000 kw. The demand is expected to continue at an accelerated rate of approximately 15%, subsequently requiring increases in VEPCO's transformer capacity within the next year.

Under the present agreement with VEPCO, the city's load growth is to be at 34.5 KV. Provisions also include maintaining the existing 12.5 KV trans-

formers within a maximum load of 25,000 KVA. By December 31, 1978, the city has contracted with VEPCO to receive one voltage at 34.5 KV at which time all conversion to 12.5 KV distribution must be accomplished by the city's own transformers. If this agreed upon date is not complied with, VEPCO will apply an additional monthly facility charge.

The conversion from 34.5 KV to 12.5 KV distribution voltage is being implemented in the following steps:

1) Spider Web 34.5 KV to the substation on Pennsylvania Avenue and provide capacity of 7,500 KVA.

2) Spider Web 34.5 KV to the substation on Fifth and Respess Streets with capacity of 10,000 KVA.

3) Increase capacity at the Forest Hills substation.

4) Purchase 34.5 KV/12.5 KV in the power plant substation to complete conversion for one voltage delivery from VEPCO at 34.5 KV.

It is recommended that an increased percentage of electrical revenue be turned back into the system to increase the transformer capacity of the substations in addition to rebuilding feeder lines, increasing wire sizes, improving voltage regulation, and converting the inadequate 2.4 KV distribution lines to 12.5 KV distribution.

This system has had a doubling of load within the past five (5) years. The deficiencies mentioned require correction for present load conditions and future load growth.

ESTIMATED DEMAND

PART V

POPULATION

The method employed in computing Washington's extraterritorial area's population projection is similar to the method used to project the city's population growth; that is, an extraterritorial housing count was multiplied by the area's average household size. This gave the extraterritorial population. By dividing the township population by the extraterritorial population, the percent of total Planning Area population residing in Washington Township was determined. This rate was then applied to the township projections through the year 2020. Again, this method makes the basic assumption that short-term future population changes will be more similar to short-term past changes.

Table 16 depicts conservative population projections. Annexations, continued industrial growth, etc. will have a positive impact on future population growth. However, due to a lack of knowledge, these variables cannot be quantified at present.

Ten-Year Population Projection

As shown in Table 16, Washington's population is projected to increase from its present 8,860 to 9,738 by the year 1985. The total Planning Area is projected to contain a population of 13,441 by 1985.

Considerations Taken Into Account In Preparing Ten-Year Projections

Seasonal population changes are those which affect the city during certain months. Examples of seasonal population changes are the influx of migrant farm workers and the influx of tourist and recreation-oriented people. Traditionally, these are the only seasonal population changes that would have any affect on the city's stable population. These increases are considered to have an impact in the Washington Planning Area. The major implication to the city of these increases is that there will be some level of increased services, such as water and sewer services required to serve these people. Similarly, as services increase so does the cost of providing these services.

Unfortunately, there is no base data available to make a quantitative assessment of seasonal population changes. Due to this lack, the only valid statement concerning seasonal population changes is that there are increases and these increases will result in some cost.

Relationship of Long-Term Projections to Desires of the People

The long term projections shown in Table 16 reflect local desires to maintain a steady and orderly growth pattern in the Washington Planning Area. Local residents also feel that these projections are consistent with their resources to provide supporting services.

5, 10, 25 and 50 Year-Projections

The City of Washington should experience a population growth of 12,300 by the year 2020, while the total Planning Area should reach 17,220. These projections are shown in Table 16.

Examination of Seasonal Population and Economic Impacts

As the Planning Area increases in population and as society becomes more leisure-oriented, seasonal populations will play a significant role in the Washington Planning Area. This becomes even more apparent when one considers the abundant water-oriented recreational opportunities in and around the Washington Planning Area.

Today, tourists and motorists travel along scenic Highway U. S. 17, which contributes to the area's economy. An investigation of several local motels indicated that between June and August, occupancy rates increased. One motel cited a ninety-five (95) percent capacity during these months. It is assumed that these travelers and other vacationers contribute not only to the city's motel businesses but also to gasoline, food, and similar businesses. However, it is anticipated that this impact will be reduced with the completion of I-95 within the next five to ten years.

TABLE 16

POPULATION PROJECTIONS

City of Washington and Extraterritorial Area

1980 - 2020

	1980	1985	1990	2000	2010	2020
Wash.	9,528	9,738	9,947	10,117	11,125	12,300
Ext. Area	13,151	13,441	13,730	13,965	15,575	17,220

SOURCE: N. C. Department of Natural & Economic Resources, based on Department of Administration projections for Beaufort County and Washington Township.

TABLE 17

POPULATION TRENDS

Washington Township and City of Washington
1940 - 1970

	1940	1950	1960	1970
Washington Township	12,195	13,792	13,906	12,354
City of Washington	8,569	9,698	9,939	8,961
Percent of Total	70.3	70.3	71.5	72.5

SOURCE: U. S. Census of Population, 1950 and 1970.

TABLE 18

POPULATION PROJECTIONS

Beaufort County and Townships
1970-2000

	1970[1]	1980	1990	2000	Change: 1970-2000 Number	Percent
Beaufort County	35,980	36,800	38,500	39,400	3,420	9.5%
Bath Township	3,237	2,940	2,810	2,610	- 627	-19.4%
Chocowinity Township	4,661	4,780	5,000	5,090	429	9.2%
Long Acre Township	6,976	7,560	8,840	10,050	3,074	44.1%
Pantego Township	5,126	4,960	4,910	4,720	- 406	- 7.9%
Richland Township	3,626	3,130	2,940	2,680	- 946	-26.1%
Washington Township	12,354	13,420	14,010	14,250	1,896	15.3%

[1]These are actual U. S. Census of Population figures for the year 1970 rather than a projection.

SOURCE: N. C. Department of Administration, Office of State Planning, based on OBERS study.

ECONOMY

Manufacturing, and wholesale and retail trade now comprise the major segments of Washington's industrial composition. As for future growth patterns, N.C. Phosphate has announced plans in the next few years to build a $200,000,000 plant to exploit the county's phosphate deposits used in the production of fertilizer. This industry will potentially employ six hundred people. In addition, Texas Gulf is expected to add substantially to its operations around Aurora and may increase its payroll by 50 percent within four to five years. Capital investment could double within the same period.

F.M.C. (Food Machinery Company) may begin mining on property it owns on the north side of the river. No one has yet made any kind of accurate prediction when this might happen or on the number of people it might employ.

These statements relating to the phosphate industry are closely tied to the market for fertilizer in the coming decades. Even should these plans materialize, there is no strong reason to suspect that their growth will increase the population or industrial base of the city. In fact, substantial growth in the county may accelerate the tendency for people to move out of the city into the county--further weakening the city's population base.

Wholesale and retail trade grew substantially in the sixties, but the work force actually declined for both males and females. Therefore, a continuing growth in sales may not necessarily lead to the employment of more people in that area.

Any effort in the future to attract more industry should concentrate on higher paying industries that require a skilled work force.

FUTURE LAND NEEDS

The previous section of this study briefly discussed future projections of population and economic changes which the city may experience. This section will evaluate these changes as they may affect the following activities: residential, commercial, and industrial land uses.

Residential Land Use

The aforementioned projections suggest that population increases are anticipated in the Washington Planning Area. Vacant lands suitable for residential purposes are limited within city limits. However, ample suitable residential lands are found in the extraterritorial area. Furthermore, city policy will be to annex urbanizing areas around its borders and provide them with municipal services such as water and sewer lines, police and fire protection, etc.

Recent residential developments in the extraterritorial areas suggest there are no problems associated with development in these areas. Generally, soil conditions in projected growth areas are moderate.

A significant factor regarding new residential activity is the form which this activity will take: multi-family units, single family units, and/or mobile home units. It is assumed that most residential activity will be allocated between the traditional single family house and mobile homes. Recent developments in the North Market Street Extension area reflect a single family unit trend,while development in the Whichard Beach area reflects a mobile home trend. While residential development is occurring in other parts of the Planning Area, the aforementioned areas reflect a very noticeable trend. In addition, if present economic conditions remain, it may also be assumed that the trend toward mobile home development will continue and increase in the future.

Commercial Land

Commercial activity is broken into two categories, the Central Business District (CBD) and outlying commercial areas.

In the CBD, land presently being used for non-CBD uses will be absorbed by commercial expansion. Although the CBD area will continue to expand, it is expected to be a slow process. There will still be non-CBD uses located in the CBD area at the end of this planning period. As a result of CBD expansion, additional buildings (those non-CBD uses) with adequate space to accommodate future commercial development will be made available.

Perhaps the greatest CBD asset is the potential to utilize its waterfront location. As stated in the 1970 Land Development Plan, this location offers certain unique advantages which, if properly exploited, could make this one of the most exciting shopping areas of eastern Carolina. Full utilization will require a complementing effort on the part of the downtown merchants to capitalize on the potentialities the waterfront affords the downtown shopping area.

As residential areas develop in the future, it is recognized that shopping areas will develop to serve these residential areas. The exact location, of course, will be determined by the residential development.

Since most residential development is projected within the extraterritorial area, these commercial activities are also projected to occur in these areas. It is recommended that shopping areas be developed as planned convenience shopping centers. Ample suitable land is available for such development in the extraterritorial area.

Industrial Land

Washington presently has approximately 1,525 acres of land zoned for industrial purposes (heavy, light, and limited). Developed industrial land

now comprises approximately 150 acres of all developed land in the planning area. The most noticeable industrial area lies on the edge of the planning area west of the city between the Atlantic Coast Line Railroad and N.C. Highway 33. Continued development is recommended in this area because of the transportation facilities available and suitable topography. Other developed industrial areas are located north of U.S. Highway 17 and west of the airfield. Light industrial activity has developed in these areas. In summary, the Washington planning area has ample land to accommodate additional industrial growth during this planning period.

COMMUNITY FACILITIES DEMAND

The guidelines for land use planning in the coastal area require that consideration be given of basic facilities needed to service estimated growth. The future development and demand for community facilities is important to any municipality due to the capital expendituaes necessary to provide such services. Since a 201 facilities plan is under study, this section does not use ten-year population projections to determine sewer and water facilities demand. However, it is noted that the present waste treatment facility is inadequate and would not provide needed service demands in the future.

Sewer

As previously stated, the Department of Public Works is currently having a 201 Study done which will provide a detailed analysis of the sewer system and project its needs over a 20-year period. The present system has a design capacity of 2.2 million gallons per day and is operating at an average of 75 percent of capacity. During periods of heavy rainfall, the system operates at over 100 percent of its capacity; while during "normal" periods, it operates at around 80 percent of its capacity. The recommendations of the 201 Study will be the basis of Washington's future expansion of its sewer system. These recommendations will take into account projected population increases for the next 20 years and how best to meet the needs of Washington and the surrounding area.

Water

The City of Washington is in the process of completing a new well and water treatment plan. A new elevated tank capable of storing 500,000 gallons has recently been completed. The well will have a capacity of about 600 gpm and the treatment plant will have the same capacity. Before completion of this project, the city had a system capable of producing 2.25 million gallons per day. With the addition of the well and treatment plant, the city will be able to process 360,000 additional gallons per day.

Storm Drainage

The City of Washington lies in a very flat area and has few natural drainage outlets, making the problem of providing adequate storm drainage extremely difficult. Jack's Creek, which drains approximately 75 percent of the town, would need more equipment than it presently has to handle the runoff of future developed areas that drain into it. There would be a need to install additional pumps with approximately 50 percent more capability on the dike at Jack's Creek. The area between Brown Street and the pumps should be dredged to allow for more retention room. The city at present can handle the equivalent of four inches of rain per hour for a twenty-minute period.

Refuse Collection and Disposal

The City of Washington Sanitation Department has had to deal with a large increase in the number of collections due to the opening of the public housing project on Ninth Street. As a result, the additional population will require another crew and packer.

Fire Protection

At the present time, the Fire Department has the necessary facilities to serve the Washington planning area.

The department operates on response time. Any area that is not within adequate range of the station cannot be considered to have the necessary fire protection no matter how excellent the crew or equipment. To retain a class VI insurance rating, it is necessary for the Washington Fire Department to have its first pumper on the scene within two minutes. By 1985, Washington will have grown by approximately 600 acres. A substation in the eastern annexed areas will cost approximately $100,000. Additional staff and equipment must be taken into account.

The American Insurance Association sets requirements for the adequacy of water systems. These requirements are based on average conditions found in communities of various sizes. Accordingly, the required fire flow is shown as follows in Table 19.

Presently, Washington, with a 1975 population of 8,860, has two pumping stations with a combined pumping capacity of 3350 gpm. If population projections are realized by 1985, Washington will have a population of 9,738, thus requiring approximately 3000 gpm--meaning Washington's Fire Department will be provided a more than adequate fire flow capacity.

Police Protection

As the town pursues its annexation objective, an increase in geographic boundaries will occur, necessitating additional patrol cars and personnel. Today, Washington employes 22 patrolmen. A minimum of 2.0 uniformed officers per thousand is recommended for police protection. The "2.0 uniformed officers per thousand population" means that two uniformed officers for every thousand residents should always be on duty. Thus, the present level of police employment should be maintained and possibly increased during this planning period.

TABLE 19

REQUIRED FIRE FLOW

Population	Required Fire Flow for Average City		Duration
	gpm	mgd	Hours
1,000	1,000	1.44	4
1,500	1,250	1.80	5
2,000	1,500	2.16	6
3,000	1,750	2.52	7
4,000	2,000	2.88	8
5,000	2,250	3.24	9
6,000	2,500	3.60	10
10,000	3,000	4.32	10
13,000	3,500	5.04	10
17,000	4,000	5.76	10

SOURCE: Standard Schedule for Cities and Towns of the United States with Reference to Their Fire Defenses and Physical Conditions (New York: American Insurance Association, National Board of Fire Underwriters, 1956 ed.)

CARRYING CAPACITY OF LAND

A specific issue regarding future growth and development concerns the capability of land and water to sustain these changes. The carrying capacity of an area means the amount of life a stable ecosystem can support. Although an ambiguous definition, the issue requires that planning must take into consideration the physical limits at which certain levels of human activity lead to undesirable alterations in the environment. In the coastal area, these detrimental effects are caused particularly by sewage and waste water disposal. The effects are noted in both ground and surface water quality; both then act as a physical limitation upon development. These physical limitations are fully developed in this land development plan under the topics of "Constraints" and "Significant Land Use Compatibility Problems...Which Have Implications for Future Land Use." The "Estimated Demand" section also notes these limitations.

The primary problem is caused by poor soil conditions, which are not conducive to on-lot disposal techniques. Specifically, the problem is that the soils in the Washington planning area either do not perk--due to a high water table--or the soils perk too fast, not having an opportunity to remove toxic wastes. Then these wastes are transmitted to adjacent bodies of water ultimately causing degradation of water quality. Although the present conditions may not be causing serious water quality problems, the implications are magnified by potential increases in both population and economic activity in the Washington planning area. The City of Washington is located in a "capacity use area"--an area where ground water and surface water must be monitored as required by the State of North Carolina. According to records kept over the past few years, the peak daily usage figure was 1.9 million

gallons per day on August 5, 1975. On a per capita basis, this usage amounts to 214 GPD. (This figure is inflated since we cannot account for the total number of visitors in the area at that time. The national average is 150 GPD.)

The city's population projections are as follows: 1980 - 9,528; 1985 - 9,738; 1990 - 9,947; 2010 - 11,125; and 2020 - 12,300. Using the inflated per capita figure of 214 GPD during the ten-year planning period (1975-1985), we would be drawing up an additional 188,000 GPD during the periods of highest consumption. Total draw-down would amount to approximately 2.1 million GPD, well below the allowable 3 million. For the year 2020, the peak usage figure for a population of 12,300 would amount to 2.6 million GPD.

As previously noted, Washington presently obtains its water supply from the Tranter's Creek watershed. Draw-down from the watershed area is expected to drop accordingly following the projected opening (April, 1977) of a 500 GPM well east of Washington in the Slatestone area. As a result, the city is moving from a total reliance on surface water supplies to a partial reliance on ground supplies.

GROWTH AND FACILITIES COSTS

The provision of adequate facilities and services to meet future growth will be a major responsibility of city government. Therefore, the cost implications of growth and development must be fully understood. It has been determined that the city's present wastewater collection and treatment system does not provide adequate service. As development and industrial growth occurs, service demands will increase-resulting in both capital and personnel needs. At the minimum, an adequate waste treatment facility would cost approximately $1,000,000 in local matching funds. In addition, the city can expect an increase in refuse collection and disposal. Additional personnel and capital needs could amount to approximately $51,000. By 1985, Washington will have grown by approximately 600 acres. What effect will that have on present fire protection capability? A fire sub-station in the eastern annexed areas will be needed to provide efficient fire protection. A sub-station will cost approximately $100,000. Additional staff and equipment must also be taken into account. These needs and improvements will total over $1,151,000. The City of Washington will probably not be able to finance all of these improvements.

Therefore, every possible federal, state, and local source should be explored. For example, the city should seek revenue sharing money providing these funds are available. Participation in the Federal Housing Program and Community Development Program should continue. Other possible sources could come from a city bond referendum and/or tax increases. A financial commitment from city government and the city's people will be necessary.

In summary, the cost discussion contained herein has been to provide an insight into the future needs of the Washington Planning Area. The city should remain cognizant of the need for various community facilities and should

continue to maintain an up-to-date inventory of the factors which generate these needs. Specific functional plans, e. g., capital improvements plans and a capital improvements budget should be prepared in order that the adequate provision of community facilities may be provided.

PLAN DESCRIPTION

PART VI

LAND CLASSIFICATION MAP

(SEE POCKET MAP IN BACK)

DESCRIPTION OF THE LAND CLASSIFICATION SYSTEM

The Land Classification System Map is a general graphic depiction of the manner in which future development in the Washington planning area is expected to occur. Previous discussions have attempted to address, in specific details, future land use demands and constraints.

The Land Classification System, as outlined in the "State Guidelines for Local Planning in the Coastal Area...." is divided into five areas: Developed, Transitional, Community, Rural, and Conservation. The following is a general description of each land classification.

a. Developed--Lands where existing population density is moderate to high and where there are a variety of land uses which have the necessary public services. These lands are delineated in "solid rust" on the Land Classification Map. All lands within Washington's city limits are classified as Developed.

FUNCTION AND STANDARDS

Developed lands will provide the service and growth centers for the planning area. They are intended to accommodate the greater portion of the necessary and natural expansion of residential, commercial, and industrial activities. The needs of Washington's permanent population for housing, recreation, commercial activity, and social and professional services will be met in these areas. The building intensity in developed areas will allow the economic feasibility of a high level of public and institutional services. Continued development and redevelopment is encouraged to provide for the orderly growth in this area.

b. Transition--Lands where local government plans to accommodate moderate to high density development during the following ten-year period and where necessary public services will be provided to accommodate that growth. These lands are delineated in "hatched rust" on the Land Classification Map. Washington's transitional lands are located adjacent to developed lands bordering city limits. Included in these transitional lands are areas currently under study for annexation. Secondary transitional lands are shown in the southern portion of the planning area across the Pamlico River. Although commercial and residential growth is expected in these areas, the city is not making a commitment to extend municipal water and sewer.

FUNCTION AND STANDARDS

Transition lands will provide for moderate intensity development in areas where development will not significantly harm relatively tolerant natural resources. These areas are designed to provide for residential expansion and growth and to accommodate uses related to and compatible with residential uses in the vicinity of developed lands where utilities and community services can be most economically and readily provided. Development and the required services and utilities will be at a generally less intense level than in developed lands.

c. Community--Lands where low density development is grouped in existing settlements or will occur in such settlements during the following ten-year period and which will not require extensive public services now or in the future. There are no lands classified as Community in the Washington planning area. Nevertheless, the following functions and standards are provided in the event that areas may develop which meet the Community classification requirements.

FUNCTION AND STANDARDS

The Community lands will provide for low intensity development opportunities at levels that will protect the natural resources of the planning area and still allow orderly growth and development. These areas will primarily provide residential opportunities for permanent residents. Public services and utilities will not be available in these areas at as high a level as in the Developed and Transitional areas.

d. Rural--Lands whose highest use is for agriculture, forestry, mining, water supply, etc., based on their natural resources potential. Also, lands for future needs not currently recognized are included. These lands are delineated in "white." These lands are located primarily in the northern portion of the planning area.

FUNCTION AND STANDARDS

Rural lands will provide areas for the long-term management of productive resources within the planning area. Building construction, residential, and related supporting development should occur only on large lots in relatively small clusters on carefully selected sites. Public services and utilities in these areas will be limited to support only those uses which are compatible with the concept of conservative resource utilization. The Rural classification will also provide large areas within the planning area with buffers against incompatible uses of land to serve future land needs which cannot be anticipated.

e. Conservation--Fragile, hazard, and other lands necessary to maintain a healthy, natural environment and necessary to provide for the public health, safety, or welfare. Conservation lands are depicted in "Dot Green" on the Land Classification Map. These are land areas within the Washington planning area where development must be restricted because of fragility or hazardous conditions or because the natural resources represent a greater value than that of development.

FUNCTION AND STANDARDS

There is sufficient land suitable for development in the planning area to accommodate projected and desirable growth without infringing upon areas which are unsuited for development. The classification of Conservation lands will direct development away from areas which cannot support intensive development, where public services are not and should not be made available, and direct it instead to more tolerant areas where services can be supplied more economically. These areas are also designated to identify characteristics which represent a potential hazard to development such as flood and erosion. These hazard factors increase the public and private cost required to support development.

PROJECTED POPULATION GROWTH ALLOCATIONS

Projected population allocation to Transition and Rural land classes reflect local desires for orderly growth. Area residents feel that the most desirable residential areas lie within the extraterritorial area. The stated objective "to annex surrounding residential areas" also reflects orderly growth desires. Most lands within the city are either developed, not for sale, or

unsuitable for development, thus leaving anticipated new residential growth to occur in the extraterritorial area.

GROSS POPULATION DENSITIES

By classifying land and allocating population densities, the local government can more efficiently budget and plan community facilities such as water and sewer systems, roads, etc. The planning area's Land Classification System depicted by Map 9 is consistent with local desires and reflects local conditions.

By 1985, Beaufort County and the City of Washington should reach populations of 38,460 and 9,738, respectively. Washington, the county seat, is expected to capture much of this growth.

Assuming these population projections are realized, Washington will have increased from its present population of 8,860 to 9,738. This represents an increase of 878 people. The majority of this growth is expected in the city's Transitional areas.

In conclusion, there are enough lands classified to accommodate Washington's projected ten-year growth.

POTENTIAL AREAS OF ENVIRONMENTAL CONCERN

PART VII

AREAS OF ENVIRONMENTAL CONCERN

The major goal of the Coastal Area Management Act is to create a balance between growth and environmental protection. The Washington Planning Area contains a number of fragile areas that would be destroyed or seriously altered in nature if unplanned, uncontrolled development should occur.

Watershed*

The Tranter's Creek watershed provides the city with its source of raw water supplies. Most of the watershed lies beyond the city's planning area. With the help of the county, the city must safeguard its water supply by preventing high density residential growth and septic tank use in these areas.

Estuarine Waters

The part of the Pamlico River north of the railroad bridge that flows within Washington's mile and a half planning jurisdiction is considered an estuary. These estuary waters can be protected by controlling development along the Public Trust Waters of the Pamlico.

Estuarine and River Erodible Areas

As applicable to the planning area, these waters are the Pamlico and Tar rivers. Estuarine and river erodible areas are considered to be that area extending from the mean water level or the mean high water level along the estuary, sounds, and rivers-a distance of 75 feet landward.

*Coastal Resources Commission deleted Tranters Creek Watershed as an AEC (June 21-22, 1977).

Complex Natural Areas

The Coastal Resources Commission may determine that there are complex natural areas within the Washington planning area. Complex natural areas are defined as lands that support native plant and animal communities and provide habitat conditions or characteristics that have remained essentially unchanged by human activity. Washington's extraterritorial jurisdiction south of the river, adjacent to the river, may possibly meet the requirements of a complex natural area. If so, this area should remain essentially in the same state as it is today.

Public Trust Navigable Waters

State guidelines for local planning under CAMA state that areas such as waterways and lands under or flowed by tidal waters or navigable waters, to which the public may have rights of access or public trust rights and areas which the State of North Carolina may be authorized to preserve, conserve, or protect under Article XIV, Section 5, of the North Carolina Constitution.

The Pamlico and Tar rivers are considered public trust navigable waters. Navigable has been defined as follows: capable of being navigated in its natural condition by the ordinary modes of navigation including modes of navigation used for recreational purposes. The natural condition of a body of water for purposes of determining navigability shall be the condition of the body of water at mean high water or ordinary high water, as the case may be, and the condition of the body of water without man-made obstructions and without temporary natural obstructions. Temporary natural conditions such as water level fluctuation and temporary natural obstructions which do not permanently or totally prevent navigation do not make an otherwise navigable stream non-navigable.

Some factors considered in identifying public trust navigable waters were: (1) the use of the body of water by the public and (2) the length of time the public

has used the area. The Pamlico and Tar rivers meet the description of Public Trust Navigable Waters and are thus identified as such.

APPROPRIATE LAND USES OF AEC's

1. Resource Areas - Watersheds *

"Tranter's Creek"

Policy Objective. To insure the continued maintenance of water quality and quantity of the surface water supply.

Appropriate Land Uses. Appropriate land uses shall be those consistent with the above policy objective, i.e., uses with little or no discharge of pollutants which would endanger ground water.

2. Estuarine Waters

"Pamlico River"

Policy Objective. To preserve and manage estuarine waters so as to safeguard and perpetuate their biological, economic and aesthetic values.

Appropriate Land Uses. Appropriate uses shall be those consistent with the above policy objective. Highest priority shall be allocated to the conservation of estuarine waters. The development of navigational channels, the use of bulkheads to prevent erosion, and the building of piers or wharfs where no

*Coastal Resources Commission deleted Tranters Creek Watershed as an AEC (June 21-22, 1977).

other feasible alternative exists are examples of land uses appropriate within estuarine waters, provided that such land uses will not be detrimental to the biological and physical estuarine functions and public trust rights. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters are generally considered incompatible with the management of estuarine waters.

4. Complex Natural Area

"Pamlico Flood Area"

Policy Objective. To preserve the natural conditions of the site so as to safeguard its existence as an example of naturally occurring, relatively undisturbed plant and animal communities of major scientific or educational value.

Appropriate Land Uses. Appropriate land uses shall be those consistent with the above policy objective. Lands within the AEC shall not be planned for uses or kinds of development that will unnecessarily jeopardize the natural or primitive character of the natural area directly or indirectly through increased accessibility. Additionally, lands adjacent to the complex natural area should not be planned for additional development that would unnecessarily endanger the recognized value of the AEC. The variability between kinds of complex natural areas and between land uses adjacent to those natural areas means that the range of permissible uses and intensity of use must be carefully tailored to the individual area.

5. Public Trust Navigable Waters

"Pamlico and Tar rivers"

Policy Objective. To protect public rights for navigation and recreation and to preserve and manage the public trust waters so as to safeguard and perpetuate their biological, economic, and aesthetic value.

Appropriate Uses. Appropriate uses shall be those consistent with the above policy objective. Any land use which interferes with the public right of navigation, or other public trust rights which the public may be found to have in these waters, shall not be allowed. The development of navigational channels, drainage ditches, the use of bulkheads to prevent erosion, and the building of piers or wharfs are examples of land uses appropriate within public trust waters, provided that such land uses will not be detrimental to the biological and physical functions and public trust rights. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters are generally considered incompatible with the management of public trust waters.

6. Estuarine and River Erodible Areas

"Pamlico and Tar rivers"

Policy Objective. To insure that development occurring within these areas is compatible with the dynamic nature of the erodible land, thus minimizing the likelihood of significant loss of property.

Appropriate Land Uses. Appropriate land uses shall be those consistent with the above policy objective. Permanent or substantial residential, commercial, institutional, or industrial structures are not appropriate uses in estuarine, sound, and river erodible areas unless stabilization has been achieved along the affected beach. Recreational, rural and conservation activities represent appropriate land uses in those erodible areas where shoreline protective construction has not been completed.

SUMMARY

PART VIII

DATA ASSEMBLY, ANALYSIS, AND STATEMENT OF MAJOR CONCLUSIONS

Data used in this plan was obtained from several major sources. These sources are as follows:

1. Previous Studies
2. Field Studies
3. Standard References such as U. S. Census, N. C. Statistical Abstract, etc.
4. A questionnaire
5. Ward meetings
6. Civic groups

An analysis of this data was conducted by the Washington City staff and presented to the Planning Board for consideration. Additional analysis was performed by the Department of Natural and Economic Resources.

The analysis results were used as a basis for citizen dialogue at public meetings, ward meetings, and civic group meetings. After identifying these major land use issues and problems, alternatives and different courses of action to meet Washington's needs were explored. Again, with citizen input, the following long-range goals were formulated:

GROWTH

To promote orderly growth in the Washington Planning Area.

ENVIRONMENTAL

To discourage development of land which is unsuitable for urban uses.

HOUSING

To provide an environment in which residents may have the opportunity to secure adequate and safe housing.

RECREATION AND PARKS

To provide a variety of recreational opportunities for all groups.

PUBLIC SAFETY

To provide the most effective and efficient means of public safety.

STREETS AND TRANSPORTATION

To provide a highly functional internal street system.

LOCAL GOVERNMENT RESPONSIVENESS

To maintain effective communication between the citizens and elected city officials.

Identification of problems and issues constituted the first phase of Washington's CAMA Land Use Planning Process. With phase one complete, the actual writing of the plan began. To this extent, analysis findings were compared with local knowledge and with planning theory, principles, and practices. The following major conclusions are the results of this process.

POPULATION

Washington's population dropped rapidly from 1960 to 1970, and has continued to do so. However, by the year 1985 it should have increased from today's 8,860 to 9,947. After 1985, the city is expected to experience a population increase from 9,947 to 12,300 by the year 2020.

Washingtonians would like for their city to grow. However, this growth must be orderly and must take into consideration (1) the city's ability to provide adequate municipal services and (2) the area's ability to provide employment opportunities. (See Tables 2 and 16).

ECONOMY

Manufacturing, wholesale and retail trade accounted for Washington's major economic activity. As of 1969, Washingtonians' per capita income was $2,168.

The area's economic outlook is encouraging. Several phosphate operations are expected to expand in the county. However, since these plans are not final, the exact impact upon Washington economy cannot be made. Continued economic and industrial development is needed to meet future employment needs.

HOUSING

In 1974 a housing survey was conducted by the city. A total of 2,722 houses were surveyed. Housing conditions were as follows: (a) 55 percent standard, (b) 42 percent substandard and (c) 3 percent dilapidated. The worst housing conditions are found in the western section of the city. This section is mostly populated with black residents.

Today Washington has an average household population of 3.26. As population estimates are realized, overcrowding will increase. It is essential that implementation of the existing housing plan continue. Added housing stock and other housing improvement will remain high among Washington's priorities.

FUTURE LAND NEEDS

The Washington Planning Area has approximately 16,471 acres of land and 1,245 acres of water area. The majority of land within the city is developed, while most of the one-mile area remains vacant and in agricultural uses. Undeveloped land located south of the Pamlico and Tar rivers is low-lying and not suitable for development. Nevertheless, Washington's future land needs can adequately be provided in the town's one-mile area and in urbanizing "annexation" areas.

COMMUNITY FACILITIES

The future development and demand for community facilities is important to any municipality due to the capital expenditures necessary to provide such services.

SEWER

The Department of Public Works is currently having a 201 Study done which will provide a detailed analysis of the sewer system and project its needs over a 20-year period. The present system has a design capacity of 2.2 million gallons per day and is operating at an average 75% capacity. The recommendations of the 201 Study will be the basis of Washington's future expansion of its sewer system. These recommendations will take into account projected population increases for the next 20 years and how best to meet the needs of Washington and the surrounding area.

WATER

The City of Washington is in the process of completing a new well and water treatment plant. A new elevated tank capable of storing 500,000 gallons has recently been completed. The well will have a capacity of about 500 gpm and the treatment plant will have the same capacity. With the addition of the well and treatment plant, the city will be able to process 360,000 additional gallons per day, bringing the total capacity to approximately 2.6 million gallons per day.

STORM DRAINAGE

The City of Washington lies in a very flat area and has few natural drainage outlets, making the problems of providing adequate storm drainage extremely difficult and very expensive. Jack's Creek, which drains approximately 75% of the town, will need more equipment than it presently has to handle the run-off of future developed areas. There will be a need to install additional pumps with approximately 50% more capability on the dike at Jack's Creek. The area between Brown Street and the pumps should be dredged to allow for more retention room. Washington's present wastewater collection

and treatment system does not provide adequate service. A "Section 201" study scheduled for completion later this year will address the most feasible methods of wastewater treatment.

FUTURE LAND USE

The Beaufort County Land Use Plan recognizes the Washington Planning Area as being the center of existing and future urban growth in the county. This relationship is depicted in the Washington Land Classification System.

The Coastal Resources Commission adopted a simplified land classification system for the coastal area. This system consists of five classes:

a. Developed - Lands where existing population density is moderate to high and where there are a variety of land uses which have the necessary public services.

b. Transition - Lands where local government plans to accommodate moderate to high density development during the following ten-year period and where necessary public services will be provided to accommodate that growth.

c. Community - Lands where low density development is grouped in existing settlements or will occur in such settlements during the following ten-year period and which will not require extensive public services now or in the future.

d. Rural - Lands whose highest use is for agriculture, forestry, mining, water supply, etc., based on their natural resources potential. Also, lands for future needs not currently recognized.

e. Conservation - Fragile, hazard and other lands necessary to provide for the the public health, safety or welfare.

Map 9 shows the location and distribution of the Washington Land Classification System.

Developed

The Beaufort County Land Use Plan shows the area within the corporate limits of Washington as developed and transitional. In the Washington Land Use Plan the area is shown as developed and transition.

Transition

Transitional lands are shown in eastern, southern and western portions of the planning area. These areas are a vital part of Washington. They will receive a full range of urban services and will likely be annexed and become legally a part of Washington. These transitional lands should be identified in the 201 Facilities Study as growth areas. Secondary, transitional lands are shown in the southern portion of the Planning Area. These areas will not receive municipal water and sewer.

RURAL

The northern portion of the Washington Planning Area is shown as rural. Similarly, in the county plan these lands are classified as rural.

CONSERVATION

The southern portion of the Planning Area is shown as conservation. This classification includes the Pamlico waters and the surrounding flood lands which are ill-suited to urban development.

POTENTIAL AREAS OF ENVIRONMENTAL CONCERN

The major goal of the Coastal Area Management Act is to create a balance between growth and environmental protection. The Washington Planning Area contains a number of fragile areas that would be destroyed or seriously altered in nature if unplanned, uncontrolled development should occur.

WATERSHED*

The Tranter's Creek watershed provides the city with its source of raw water supplies. Washington has both a primary and an auxiliary raw water intake located on Tranter's Creek.

Tranter's Creek is the primary stream in the watershed and is fed by Turkey Swamp, Beargrass Swamp, Pinelog Branch, Meadow Branch, Great Branch, Briery Swamp, Haw Branch, Horsepen Swamp, Poley Branch, Pea Branch, Pocosin Branch, Aggie Run, Old Ford Swamp, Singleton Swamp, Latham Creek, Gun Swamp, Snoad Branch, Maple Branch, Mitchell Branch, and Cherry Run. Most of the watershed lies beyond the city's Planning Area. With the help of the county, the city must safeguard its water supply by preventing high density residential growth and septic tank use in these areas.

ESTUARINE WATERS

The part of the Pamlico River north of the railroad bridge that flows within Washington's mile and a half planning jurisdiction is considered an estuary. These estuary waters can be protected by controlling development along the Public Trust Waters of the Pamlico.

COMPLEX NATURAL AREAS

The Coastal Resources Commission may determine that there are complex natural areas within the Washington Planning Area. Complex natural areas are defined as lands that support native plant and animal communities and provide habitat conditions or characteristics that have remained essentially unchanged by human activity. Washington's extraterritorial jurisdiction south of and adjacent to the river may possibly meet the requirements of complex natural area. If so, this area should remain essentially in the same state it is today.

*Coastal Resources Commission deleted Tranters Creek Watershed as an AEC (June 21-22, 1977).

PUBLIC TRUST WATERS

As applicable to the planning area, these waters are the Pamlico and Tar rivers and their tributaries. These waters are also shown as public trust navigable waters in the county plan.

APPLICATION OF DATA TO PLAN'S FORMULATION

Once data was assembled and analyzed, then compared with local area knowledge, the formulation of this plan began. The Planning Board utilized the data by using it as a catalyst to discuss issues and problems. The result of this planning process is this document.

ESTUARINE AND RIVER ERODIBLE AREAS

"Estuarine and river erodible areas are considered to be that area extending from the mean water level or the mean high water level along the estuary, sounds, and rivers of the 20-county area a distance of 75 feet landward." As applicable to the planning area, these waters are the Pamlico and Tar rivers and their tributaries. In research conducted by the Institute for Coastal and Marine Resources at East Carolina University, it was found that "estuarine and river erodible areas" within the Washington Planning Area have not undergone significant erosion during the past 25 years because much of the area has been stabilized by bulkheading. It was felt that the main thrust of shoreline erosion is found further downstream.

CITY-COUNTY RELATIONSHIP

PART IX

RELATIONSHIP DEFINED

The Washington and Beaufort County Plan relationship can be defined as "a coordinated effort through effective land use planning to provide a balanced growth that offers the best affordable working and living environment for all Beaufort residents." This relationship has been part of a continuous process which has taken two forms: (1) complementing goals and objectives, and (2) a compatible county-city Land Classification System.

Both county and city plans address similar interests and citizen concerns. The following are specific examples of county and city goals and objectives relationship.

COUNTY GOAL:	*To ensure that recreational development such as travel trailer camps, second home developments, etc., will occur in a manner that will protect the natural amenities that attracted such development.*
CITY GOAL:	*To discourage development of land which is unsuitable for urban uses.*
COUNTY GOAL:	*To guide growth in Beaufort County so that it occurs in a slow, orderly manner.*
CITY GOAL:	*To promote orderly growth in the Washington planning area.*
COUNTY OBJECTIVE:	*To zone growth "hot spots" such as around Washington to ensure that future growth occurs in an orderly manner.*
CITY OBJECTIVE:	*To seek a detailed soils map for the City of Washington and Beaufort County to provide information on soils limitations on development.*
COUNTY GOAL:	*To protect the quality and natural setting of the county's waterways.*
CITY OBJECTIVE:	*To annex areas that are adjacent to the river and that lack sewerage to ensure that septic tank infiltration does not downgrade the quality of the Pamlico River.*
COUNTY GOAL:	*To ensure that recreational development such as travel trailer camps, second home developments, etc., will occur in a manner that will protect the natural amenities that attracted such development.*

CITY OBJECTIVE: *To coordinate city-county recreational activities to eliminate needless duplication of personnel, facilities, and programs.*

These are only a few examples of Washington and Beaufort County Plan relationship in terms of complementing goals and objectives. For more specifics, the reader is asked to consult the "Goals" and "Objectives" sections of individual plans. In addition, examination of both the Land Classification maps and the text will graphically and verbally depict compatibility and relationship of the plan's land classification system.

APPENDIX

Name of Stream: Pamlico

Class: C Sw

A. Class SC Waters

1) Best usage of waters: Fishing and any other usage except bathing or shellfishing for market purposes.

2) Conditions related to best usage: The waters will be suitable for fishing and fish propagation. Also suitable for other uses requiring waters of lower quality.

3) Quality standards applicable to class SC waters.

a. Floating solids; settleable solids, sludge deposits: only such amounts attributable to sewage, industrial wastes, or other wastes, as will not, after reasonable opportunity for dilution and mixture of same with the receiving waters, make the waters unsafe or unsuitable for fish, shellfish, and wildlife, or impair the waters for any other best usage established for this class.

b. pH: Shall be normal for the waters in the area, which generally shall range between 6.0 and 8.5, except that swamp waters may have a minimum of 4.3.

c. Dissolved oxygen: Not less than 5.0 mg/1, except that swamp waters may have a minimum of 4.0 mg/1.

d. Toxic wastes; oils; deleterious substances; colored or other wastes; Only such amounts, whether alone or in combination with other substances or wastes as will not render the waters injurious to fish and shellfish, adversely affect the palatability of same or impair the waters for any other best usage established for this class.

e. Organisms of coliform group: Fecal coliforms not to exceed a log mean of 1,000/100ml (MPN or MF count) based upon at least five consecutive samples examined during any 30-day period; nor exceed 2,000/100ml in more than 20% of the samples examined during such period. (Not applicable during or immediately following periods of rainfall.)

f. Temperature: Shall not be increased above the natural water temperature by more than 1.5°F. during the months of June, July, and August nor more than 4.0°F., during other months, and in no case to exceed 90°F., due to the discharge of heated liquids.

Name of Stream: Tar

Class: C

B. Class C Waters

1) Best usage of waters: Fishing, boating, wading, and any other usage except for bathing or as a source of water supply for drinking, culinary or food-processing purposes.

2) Conditions related to best usage: The waters will be suitable for fish and wildlife propagation. Also suitable for boating, wading, and other uses requiring waters of lower quality.

3) Quality standards applicable to class C waters.

a. Floating solids; settleable solids; sludge deposits: Only such amounts attributable to sewage, industrial wastes or other wastes as will not, after reasonable opportunity for dilution and mixture of same with the receiving waters, make the waters unsafe or unsuitable for fish and wildlife, or impair the waters for any other best usage established for this class.

b. pH: Shall be normal for the waters in the area, which generally shall range between 6.0 and 8.5, except that swamp waters may have a low of 4.3.

c. Dissolved oxygen: Not less than 6.0 mg/l for natural trout waters; 5.0 mg/l for put-and-take trout waters; not less than a daily average of 5.0 mg/l with a minimum of not less than 4.0 mg/l for non-trout waters, except that swamp waters may have lower values if caused by natural conditions.

d. Toxic wastes; oils; deleterious substances; colored or other wastes; Only such amounts, whether alone or in combination with other substances or wastes as will not render the waters injurious to fish and wildlife or adversely affect the palatability of same, or impair the waters for any other best usage established for this class.

e. Organisms of coliform group: Fecal coliforms not to exceed a log mean of 1,000/100 ml (MPN or MF count) based upon at least five consecutive samples examined during any 30-day period; nor exceed 2,000/100 ml in more than 20% of the samples examined during such period. (Not applicable during or immediately following periods of rainfall.)

f. Temperature: Not to exceed 5°F. above the natural water temperature, and in no case to exceed 84°F. for mountain and upper piedmont waters and 90°F. for lower piedmont and coastal plain waters. The temperature of natural trout waters shall not be significantly increased due to the discharge of heated liquids and shall not exceed 68°F.; however, the temperature of put-and-take trout waters may be increased by as much as 3°F. but the maximum may not exceed 70°F.

BIBLIOGRAPHY

BIBLIOGRAPHY

Barick, Frank B. and T. Stuart Critcher. Wildlife and Land Use Planning with Particular Reference to Coastal Counties, N. C. Wildlife Resources Commission, Raleigh, N. C. 1975.

Beaufort Soil and Water Conservation District. An Appraisal of Potentials: Outdoor Development, Beaufort County, N. C. Beaufort Soil and Water Conservation District, Washington, N. C. 1972.

Board of Water and Air Resources. Rules, Regulations, Classification and Water Quality Standards Applicable to the Surface Waters of North Carolina, Raleigh, Department of Natural and Economic Resources, 1972.

Bureau of Employment Security Research. N. C. Labor Force Estimates, Employment Security Commission of N. C., Raleigh, N. C. 1975.

Coastal Resources Commission. Handbook on Public Participation in the Development of Land Use Plans in the Coastal Areas of North Carolina, Department of Natural and Economic Resources, Raleigh, 1975.

Coastal Resources Commission. "State Guidelines for Local Planning in the Coastal Area under the Coastal Area Management Act." Raleigh, N.C. 1975.

County Population Trends, North Carolina 1790-1960, Carolina Population Center, U.N.C. and Statistical Services Center, N. C. Department of Administration, Raleigh, N. C. 1969.

Dawson, Amos. "Report on Land and Water Resource Use Problems Related to the Carrying Capacity of the Coastal Area of North Carolina," Coastal Resources Commission, Raleigh, 1976.

Employment Security Commission. North Carolina Commuting Pattern, 1960-1970, Employment Security Commission of Raleigh, N. C. 1974.

Endangered Species Committee, Department of Natural & Economic Resources. Preliminary List of Endangered Plant and Animal Species in North Carolina, Resources Management Section, Raleigh, June, 1973.

Fish, Frederic F., A Catalog of the Inland Fishing Waters of North Carolina, Raleigh, N. C. Wildlife Resources Commission, 1969.

Freeman, W. F. Region Q: Water Resource Management (High Point, North Carolina: Freeman Associates, 1975).

Goodman, W. I. and Fruend, E. C., eds. Principles and Practices of Urban Planning (Washington, D. C.: International City Managers' Association, 1968).

N. C. Agricultural Extension Service and North Carolina Department of Natural and Economic Resources, Coastal Area Management: A New Look on the Horizon, Misc. Ext., Publication No. 131 (Raleigh: North Carolina Agricultural Extension, 1974).

N. C. Coastal Resources Commission. State Guidelines for Local Planning in the Coastal Area Under the Coastal Area Management Act of 1974, (G.S. 113A-107 e, 1975).

N. C. Department of Transportation. Seven Year Highway Plan, N. C. Department of Transportation, Raleigh, N.C., 1975.

N. C. Soil and Water Conservation and Needs Committee. North Carolina Conservation Needs Inventory. N. C.-United Stated Department of Agriculture, Soil Conservation Service, Raleigh, N.C., December, 1971.

N. C. Department of Administration. North Carolina State Government Statistical Abstract. Second Edition, Raleigh, 1973.

N.C. Department of Administration, Profile of North Carolina Counties, Raleigh N. C., March 1975.

N. C. Land Policy Council. A Land Policy for North Carolina, Raleigh, 1976.

N. C. Department of Natural & Economic Resources. Rules, Regulations, Classifications, and Water Quality Standards Applicable to the Surface Waters of N.C. Division of Environmental Management, Raleigh, 1976.

N. C. Department of Natural & Economic Resources. Washington Park and Recreation Study, Raleigh, N. C., 1967.

Rodman, W. C. Comprehensive Water and Sewer Study: Beaufort County, N.C. W. C. Rodman--Land Surveying and Civil Engineering, Washington, N.C. 1971.

Sharpe, Bill. A New Geography of North Carolina, Vol. IV, (Raleigh, N.C.: Sharpe Publishing Company, Inc., 1965).

U. S. Department of Agriculture, Soil Conservation Service, Descriptions of Soil Associations, Beaufort County (U.S. Government Printing Office, 1971).

U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population (PC(1)C35NC) General Social and Economic Characteristics, United States Government Printing Office, Washington, D.C. 1972.

U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population General Population Characteristics. (PC(1)BB5NC), United States Government Printing Office, Washington, D.C., 1972.

U. S. Water Resources Council. OBERS Projections, Series E, Bureau of the Census, Washington, D. C., 1972.

VEPCO. City of Washington and Beaufort County, North Carolina: An Economic Study, Virginia Electric and Power Company of Williamston, N.C., 1964.

Wilkinson, Richard P. and R. Paul Darst. Critical Areas of North Carolina, N.C. Department of Administration, Raleigh, N.C, 1972.

Wilson, Kenneth A. North Carolina Wetlands Their Distribution and Management, Raleigh, N.C. Wildlife Resources Commission, 1962.

Woodhouse, W. W., E.D. Seneca and S. W. Broome. Marsh Building with Dredge Spoils in North Carolina. Coastal Engineering Research Center, et. al. Raleigh, 1970.

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